

NEW TAXA OF VENEZUELAN ARACEAE

George S. Bunting

A new revision of the Venezuelan Araceae undertaken since the publication of my *Sinopsis de las Araceae de Venezuela* (1979), has demonstrated the even greater diversity of the aroids in that country. Studies of recent collections, mostly from previously unexplored areas of Venezuela, have revealed a number of taxa new to science; the recognition of other taxa has resulted from the definitive study of some older collections. A number of the specimens cited here were made available for my study by the Herbario Nacional de Venezuela [VEN], the Herbario Ovalles of the Facultad de Farmacia, Universidad Central de Venezuela [MYF], and the Instituto Universitario de Tecnología in Coro, Falcón [IUTC]; others are material resulting from my own field work. The herbarium of the Jardín Botánico de Maracaibo is here cited as VZM.

ANTHURIUM

***Anthurium* *aroense* Bunt., sp. nov. (Fig. 1)**

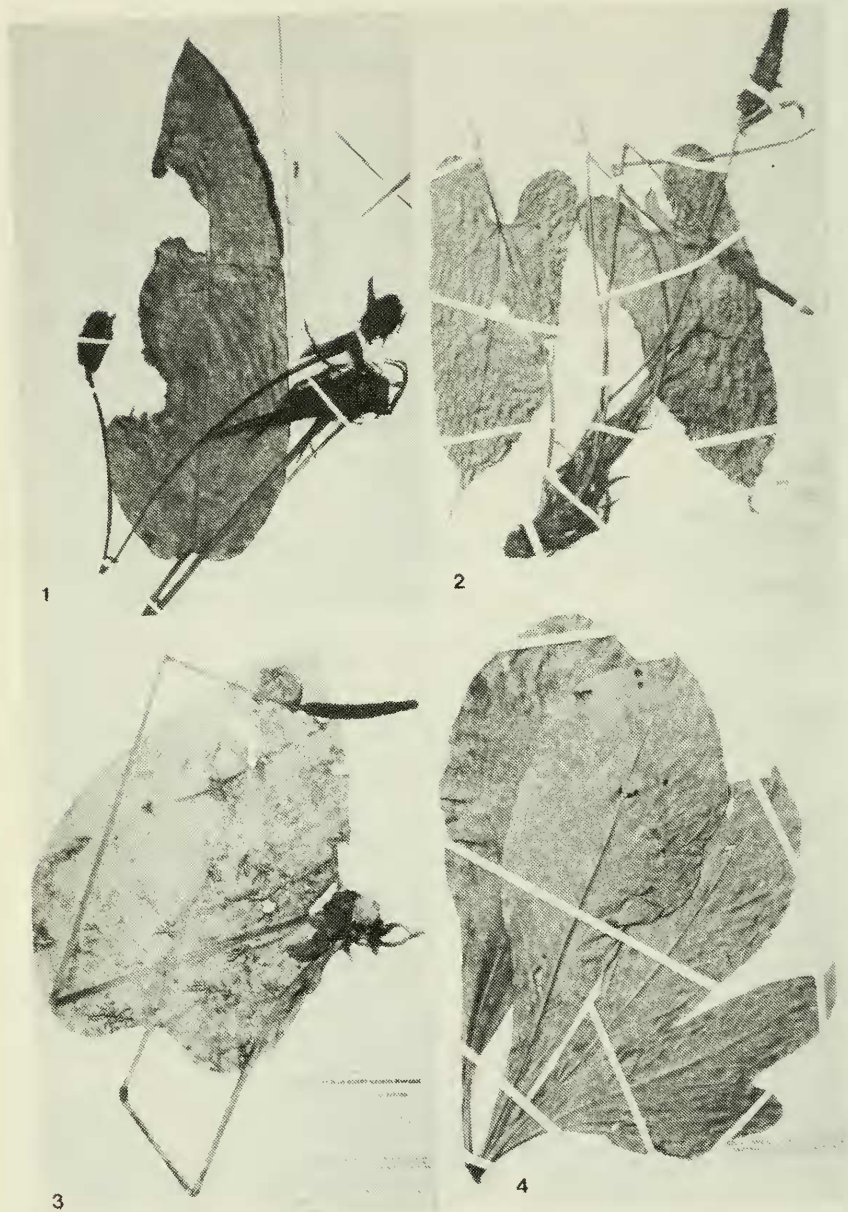
A. pariensi Bunt. primo aspectu maxime simile, sed foliorum lamina tantum subcoriacea haud cartilaginea, paribus duobus nervorum lateralium e basi costae ascendentibus vix validioribus quam nervis lateralibus ceteris e costa abeuntibus, spadice breviter stipitate (in illa sessili) floribus 4 in quaque spira primaria (in illa 7) et 5 in quaque spira alterna (in illa 12) visibilibus.

TYPUS: R. Liesner & Angel González 9824. Epiphyte. Spathe green, tinted with red-purple. Spadix purple-brown, becoming greenish. Peduncle round. Primary forest; Cerro Negro, 8 km SW of San Felipe, 10°17' N., 69°1' W., Sierra de Aroa, Edo. Yaracuy, 1200-1800 m, 1-2 April 1980 [Holotypus: VEN].

***Anthurium* *berryi* Bunt., sp. nov. (Fig. 2)**

A. tamaensi Bunt. simile, sed differt foliorum lamina chartaceo-pergamena (in illa subcoriacea) et nervatione minus prominenti, nervo colectivo ad marginem approximatiore, petiolo proportione breviori (respectu lamina), spatha spadiceque minore, spatha vix oblique affixa et non decurrenti.

TYPUS: Charles W. Wood & Paul E. Berry 95. Terrestrial herb. Stem lustrous, green-brown, pith white-pink. Petiole same color as stem. Leaf lustrous dark green over light green. Bract [spathe?] lustrous green flushed brownish rose. Male spathe [spadix in anthesis?] dark purple-brown, female spathe [spadix post-anthesis?] green with brownish tips on flowers. Among moist, mossy rocks in deeply shaded quebrada; headwaters of Río Guasare, "Campamento Frontera V", 10°23'7.8" N., 72°52'45.5" W., on international boundary, Edo. Zulia, 2700-3300 m, 20-23 July 1974 [Holotypus: VEN].



Anthurium guanchezii Bunt., sp. nov. (Fig. 3)

Herba terrestris ut videtur non scandens. Caulis internodiis brevissimis 2.5 cm crassis (in sicco) cataphyllorum reliquiis persistentibus. Petiolus 30 cm longus parte vaginata 1.7 cm longa; geniculum 0.8-1 cm longum. Foliorum lamina pergama vel semicoriacea (in sicco) ambitu ovata 33.5 cm longa 22.5 cm lata, ad basim sinuata sinu 1.8 cm profundo, ad apicem sensim acuminata (2.5 cm), abaxiale fusco-punctata, costa per 4.5 cm inferiora nuda (i.e. sine lamina) plus minusve cylindrica attamen adaxiale anguste canaliculata, nervis lateralibus primariis tenuibus prominentibusque utrinque ca. 8 sub angulo ca. 40° (2-3 paribus infimis sub angulo majore) abeuntibus. Pedunculus 58 cm longus. Spatha ovata minimum 9 cm longa 2.5 cm lata patento-recurvata, basi decurrente (1.2 cm) apice acuminata. Spadix stipitatus stipite postice 0.4 cm antice 1.7 cm longo, 8.2 cm longus (in specimine; ut videtur apice carenti) 0.7 cm crassus (sub fructu 1.1 cm crassus).

TYPUS: Francisco Guánchez & E. Melgueiro 3451. Terrestre; espádice con frutos color aceituna cuando inmaduros. Muy frecuente en todo el bosque bajo ralo (B3r); transecto desde matorral ribereño hasta bosque bajo ralo, en la margen izquierda del caño Cabeza de Manteco, afluente del río Autana, en el raudal "Manteco", 4° 52' N., 67° 27' O., Depto. Atures, Territorio Federal Amazonas, 110-120 m, 10 de noviembre, 1984 [Holotypus: VEN; isotypus: VZM].

Anthurium huequeense Bunt., sp. nov.

Differt a A. crassinervio (Jacq.) Schott statura minore, petiolo abaxiale rotundato, spatha viridi et persistenti, spadice sub anthesi viridi tandem vinaceo-suffuso.

TYPUS: George S. Bunting 7704. Terrestre. Rizoma horizontal, entrenudos muy abreviados con numerosas raíces adventicias gruesas y grisáceas. Pecíolo semiterete, adaxialmente canaliculado, abaxialmente a veces 3-carinado. Lámina bien lisa, nervio medio anguloso-convexo adax., abax. como pecíolo. Inflorescencia toda verde en anthesis; espata cochleariforma, extendido-ascendente, luego circinada; espádice verde en anthesis, luego teñido morado. Cultivada en el Jardín Botánico de Maracaibo, de una planta traída por H. v.d.Werff recolectada en matorral siempreverde con Capparis spp. y Geoffroea, en el delta del río Hueque, carretera Coro-Morón, 100 km al este de Coro, Dto. Zamora, Edo. Falcón, 50 m, 12 de julio, 1985 [Holotypus: NY; isotypus: VEN].

Anthurium longissimum Pitt. subsp. **nirguense** Bunt., subsp. nov. (Fig. 4)

A subsp. longissimo petiolis pedunculisque longistrorsum sulcatis, foliorum segmentis proportione latioribus, nervis principalibus in superficie abaxiali atque cataphyllis petiolis pedunculis spathisque praesertim in organis novellis cupreo-purpureo- vel malvacei- vel brunneo-suffusis dignoscenda.

TYPUS: Julian A. Steyermark & George S. Bunting 97722. Stem 1.3 m long, clinging tightly to tree trunk, internodes short, one

cm or less long; spathe coppery red-purple abaxially, creamy suffused red-purple adaxially, reflexed, 5 x 3 cm; spadix 5 cm long, 2.1 cm diam. throughout, buff in development. Selva nublada en la fila del Cerro La Chapa, al norte de Nirgua, Edo. Yaracuy, 1200-1360 m, 11 de marzo, 1967 [Holotypus: VEN].

Anthurium perijanum Bunt., sp. nov. (Fig. 5)

A. subsagittato (HBK) Kunth affine, a quo imprimis differt foliorum lamina longiore ad 45 cm longa et 16 cm lata, proportione angustiore (in hac 2.8:1, in illa 1.4-2.3:1), forma plus minusve oblonga lobis posticis minus patentibus.

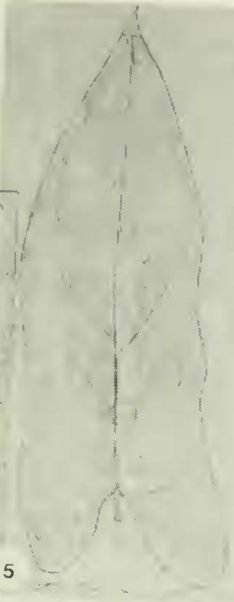
TYPUS: Julian A. Steyermark, G.C.K. & E. Dunsterville 105560. Climbing; spathe revolute in 2 spirals, 10-12 x 2.1 cm, pale green turning dull yellow; spadix dull green, 15-18 x 1.1 cm. Bosque húmedo; a lo largo de la quebrada del río Omira-kuná (Tumuriasa), cerca de la frontera colombo-venezolana al suroeste de Pishikakao e Iriá, Sierra de Perijá, Edo. Zulia, 1440-1460 m, 22-23 y 28 de marzo, 1972 [Holotypus: VEN].

Anthurium subscriptum Bunt., sp. nov. (Fig. 6)

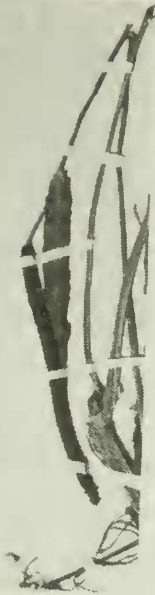
Herba humilis terrestris vel epiphytica. Caulis 0.7 cm crassus internodiis 1.5 cm vel minus longis paucis radicibus adventitiis gracilibus. Cataphyllum ca. 5 cm longum mox in fibras grossas brunneas pallidulas dissolutum et amittens. Petiolus ut videtur adaxiale sulcatus, nigrescens (in sicco) 8.5-11 cm longus parte vaginata lata ca. 1 cm longa; geniculum ca. 0.8 cm longum. Foliorum lamina plus minusve coriacea (in sicco; in vivo probabiliter carnosa), anguste elliptica parum obovata, e medio uterque extremitatem versus attenuata, ad basim plus minusve cuneata, 17.5-23.5 cm longa 3.8-4.1 cm lata, adaxiale nervis haud manifestis costa et nervis collectivis tantum per sulcos angustatos notatis (in sicco), abaxiale conspicue copioseque brunneo-punctata nervatione conspicua costa quam nervis ceteris validiore, nervis lateralibus 1. utrinque 5 sub angulo ca. 20° abeuntibus in nervum collectivum e basi ad apicem currentem a margine 0.5 cm remotum conjunctis. Pedunculus 34-37 cm longus rubro-brunneus (in sicco). Spatha pusilla gracilis demum 2.1 cm longa (in specimine), brunnescens. Spadix stipitatus stipite postice 0.2 cm antice 0.6 cm longo, brunnescens 8.3-9 cm longus 0.3-0.5 cm crassus floribus 3 in quaque spira primaria et 5 in quaque alterna.

TYPUS: Francisco Guánchez & E. Melgueiro 3443. Hierba terrestre, a veces epífita a un metro de suelo; espádice y espata marrón tierra cuando maduros. Muy frecuente en todo el bosque (B3T); transecto desde matorral ribereño hasta bosque ralo, en la margen izquierda del caño Cabeza de Manteco, afluente del río Autana, en raudal "Manteco", 4°52' N., 67°27' O., Depto. Atures, Territorio Federal Amazonas, 110-120 m, 10 de noviembre, 1984 [Holotypus: VZM; isotypus: VEN].

This species appears to be related to *A. friedrichsthali* Schott, of Central America.



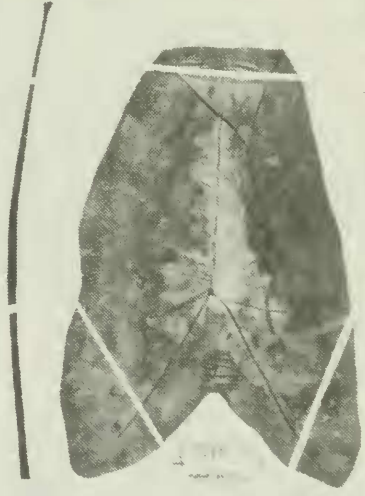
5



6



7



8

Anthurium xanthoneurum Bunt., sp. nov. (Fig. 7)

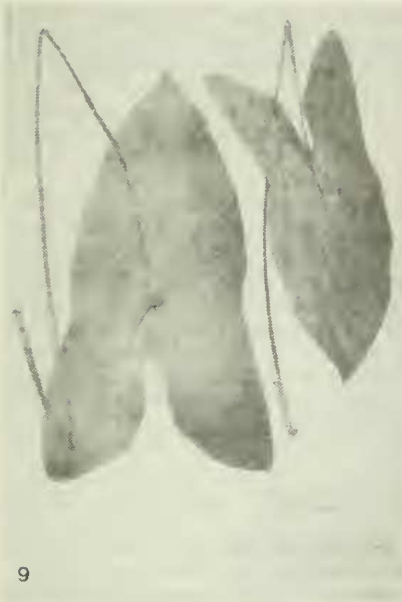
A speciebus rosulatis similibus differt combinatione petiolorum brevissimorum usque ad basim laminae vaginatorum cum foliorum laminis rigide crasso-coriaceis amplitudine comparate parvae abaxiale conspicue brunneo-punctatis adaxiale nitidissimis costa et nervis lateralibus I. flavis.

TYPUS: Julian A. Steyermark, Paul Berry & Francisco Delascio 130054. Acaulescent; leaves stiff-coriaceous, deep green above with sulcate or impressed yellow lateral nerves and elevated yellow midrib, lower side with elevated nerves and midrib; spadix brownish green. On igneous rock outcrops; piedra ígnea, Cerro Aratitiope, 2°10' N., 65°34' O., aprox. 70 km SSO de Ocamo, con ríachuelos afluentes al río Manipitare, Depto. Río Negro, Territorio Federal Amazonas, 990-1670 m, 24-28 de febrero, 1984 [Holotypus: NY; isotypus: VEN].

CALADIUM**Caladium aturense** Bunt., sp. nov. (Fig. 9, 10)

Herba acaulescens. Cormus 4 cm diam. 3.5 cm crassus carne alba. Petiolus 68-71 cm longus 0.6 cm diam. (in medio), saltem supra medium brunneo-atropurpureus vel roseo-brunneus perpallidus et brunneo-suffusus. Foliorum lamina membranacea peltata ambitu subtriangularis (sagittata) 34-41 cm longa usque 27 cm lata (trans lobos posticos), in loco insertione petioli fere opposito margine latere altero contracto; lobus anticus triangulari-ovatus usque 17.5 cm latus (in loco 3-5 cm supra insertione petioli) inde angustatus apice breviter acuminatus, nervis lateralibus I. utrinque 3 validis (centrali sub angulo 35-45° abeunti inferiore latius extenso) in nervum collectivum a margine 0.3-0.9 cm remotum conjunctis; lobi postici ambitu anguste triangulares interdum marginibus sinuatis saepe divaricati 14-21.5 cm longi 6-7 cm lati per 2.2-4 cm proximalia connati inde attenuati apice ipso obtusi sinu subtriangulari 11.3-13.3 cm longo sejuncti; lamina adaxiale smaragdina glaucescens interdum (i.e. in stirpe sterili fortasse juvenili) cremeo-maculata, abaxiale ex argenteo cyano-viridis interdum purpureo-suffusa. Pedunculus 38 cm longus viridis deorsum versus cremicolor striis griseo-brunneis notatus. Spatha (caudicula terminali 1.5 cm longa inclusa) 10 cm longa, tubo 4.3 cm longo extra impolito viridi postice paulo glauco intra griseo-viridi atamen per 0.3-0.5 cm basalia purpureo, limbo in ambabus superficiebus albo.

TYPUS: George S. Bunting, L.M.A. Akkermans & J. van Rooden 3480. Cormous herb. Corm 4 cm diam., 3.5 cm deep, white inside. Leaves glaucescent and emerald green adax., abax. pale gray-green to suffused purplish. Petiole brown-dark purple or tan strongly suffused dark brown, slender, to 6 mm at midpoint. Some leaves mottled creamy. En sabana con manchas ocasionales de bosque; entre Puerto Ayacucho y km 35 hacia Sanariapo, Depto. Atures, Territorio Federal Amazonas, 100-140 m, 6-19 de julio, 1969 [Holotypus: NY; isotypi: K, MY, U].



PARATYPUS: Francisco Guánchez 2852. Hierba creciendo sobre suelo orgánico en el afloramiento rocoso, en lugar sombreado, aislada y poco frecuente (UL); margen izquierda del río Guayapo, en el raudal Moriche, transecta de dirección norte, pasando por el bosque ribereño-afloramiento granítico o laja-bosque medio denso, 4°24' N., 67°32' O., Depto. Atures, Territorio Federal Amazonas, 110 m, 14 de julio, 1984 [VEN].

Caladium steyermarkii Bunt., sp. nov. (Fig. 8)

Herba acaulescens cormosa. Petiolus validus (0.29-)0.46-1.0 m longus, quam lamina fere duplo longior, ex brunneo vel sordide vinaceo-roseo viridis parte vaginata (5-)11-16 cm longa. Foliorum lamina tenuis peltata ambitu ovato-triangularis 25-40 cm longa 16-24 cm lata apice acuminata, ad basim subsagittata, adaxiale impolita saturate viridis glaucescens vel coeruleo-grisea maculis griseis inter nervos laterales I. notata, abaxiale argentea vel griseo-glaucous et violaceo-suffusa nervis omnibus violaceis; lobus anticus secus costam 16-26 cm longus nervis lateralibus I. utrinque 4-5 centralibus sub angulo ca. 40-50° abeuntibus; lobi postici quam anticus ca. duplo breviores, ovato-triangulares per 4.3-6.6 cm basalia connati, ad apicem angulares apice ipso valde obtusi sinu aperto triangulari 4-7 cm profundo sejuncti; nervi principales omnes in nervum collectivum e basi ad apicem currentem a margine 0.3-0.5 cm remotum conjuncti. Pedunculus 26-34 cm longus. Spatha 10-12.5 cm longa tubo 3.8-5 cm longo extra viridi et griseo-glaucous limbo e viridi luteolo-cremicolori, intra tubo viridi limbo fere albo.

TYPUS: Julian A. Steyermark, George S. Bunting & Carlos Blanco 102035. Leaves purplish beneath. Just south of Río Borgüita¹, Edo. Apure, 9 de abril, 1968 [Holotypus: VEN].

PARATYPI: George S. Bunting 4488. Cormous herb ca. 0.8 m tall. Petiole green strongly mottled brown. Leaf blade adax. matte dark green & glaucescent with largish gray blotches between primary lateral veins; abax. gray-glaucous, suffused violet, with midrib, lateral veins & veinlets all violet. Spathe limb outside yellowish cream with greenish cast, inside near-white, tube green & gray-glaucous. Grown from corm of type collection, Steyermark et al. 102035, cultivated in the Facultad de Agronomía, Universidad Central de Venezuela, Maracay; specimen prepared 17 June 1971. Origin of corm: between San Camilo (El Nula) and the Río Sarare, ca. 2 km upstream from south bank of Río Nula, Selva de San Camilo, Edo. Apure, 280 m [VEN].

Julian A. Steyermark & Marvin Rabe 96621. Terrestrial; leaf blades silvery beneath, bluish green above; petiole dull wine-rose; spathe blue-green with the upper narrowed part paler blue-

¹ fide label, but this datum is erroneous; the correct collection locality is that cited in the following paragraph under "PARATYPI: George S. Bunting 4488".

green (not mature). Swampy rill along wet forest, between Piscuri and Ayari [approx. km 60 of the San Cristóbal-Barinas highway], Edo. Táchira, 175-200 m, 26-27 de agosto, 1966 [VEN].

DRACONTIUM

Dracontium aricuaisanum Bunt., sp. nov. (Fig. 11, 12)

Herba acaulescens usque ad 1.5 m alta. Cormus obovoideus 4-6 cm diam. 3.5-4 cm crassus carne alba, in margine superiore cormulos obovoideos (1.5 cm longos 0.9 cm diam.) ferens. Cataphyllum 9 cm longum. Folium solitarium plerumque post anthesin prodiens. Petiolus teres 0.47-1.2 m longus basi 1.6 cm diam., nigro-viridis vel brunneus vel griseo-olivaceus maculis diagonalibus pallide griseis notatus et spinescens. Foliorum lamina ambitu ovato-circularis tripartita fenestris numerosis irregulatum ellipticis ut in *Monstera* perforata abaxiale interdum purpureo-suffusa, quoque segmento petiolulato (petiolulo griseo sat ascendenti) irregulatum bi- vel tripinnatifido segmento centrali 25-43 cm longo 14-35 cm lato divisionibus majoribus usque ad 24 cm longis, segmentis lateralibus centrali similibus. Pedunculus saepe praecox 14-25 cm longus (sub fructu usque ad 39 cm longis) asperus maculis alternatim olivaceo-nigris et griseis interdum roseo-suffusis notatus. Spatha subovata usque ad 11-15 cm longa, per 1.5-3 cm basalia convoluta in tubum infundibuliformem ad 2.5 cm latum formata, sursum in limbum 5.5-7 cm latum complanata, ad apicem acuminata, in ambabus superficiebus impolita ex olivaceo vel nigro-olivaceo vinacea vel brunnea, adaxiale dense et subtilissime albo-pilosula velut farina obducta nervis verticalibus ca. 9, denique caduca. Spadix tubum spathae superans, sessilis vel stipitatus stipite 0.8 cm longo, 1.8-2.4 cm longus 0.8 cm diam., ejusdem coloris quam spatha. Filamenta diaphana et viridula; antherae pallide violaceae. Pistillum album apice purpureum; ovarium 3-4-loculare loculis uniovulatis. Infructescentia nuda ellipsoidea superficie laevi fructuum marginibus vix manifestis, ad 4 cm longa 3.8 cm crassa in stipite ca. 1 cm longo. Baccae (immaturae) apice truncatae nigro-virides ad 1.3 cm crassae. Semina apostrophiformia porcis dorsalibus interruptis, 0.7 cm longa 0.5-0.55 cm lata.

TYPUS: George S. Bunting, Guillermo Panapera & Henry Lobo 10866. Hierba terrestre; cormo obovoide, blanco adentro, 4 cm diám., 3,5 cm de espesor. Pecíolo y pedúnculo ásperos y marcados en modo diagonal con ceniciento y griseo-oliváceo. Espata vino tinto intenso o apagado, con escamitas como polvo blanco, nervios 1. ca. 9 más o menos destacados y más o menos arrugada entre ellos. Pecíolo x 1,2 cm por debajo, x 0.6 cm por arriba. Zona de bosque siempreverde; en orilla boscosa del río Aricuaisá, alrededores de la Estación Hidrológica Aricuaisá-Pie de Monte, 9°35'30" N., 72°53'55" O., Dtto. Perijá, Edo. Zulia, 100-250 m, 25 de febrero-3 de marzo, 1982 [Holotypus: NY; isotypus: VEN].

PARATYPUS: George S. Bunting, Guillermo Panapera & Jorge Trujillo 11463. Hierba cormosa. Pecíolo veteado con verde oliváceo y gris negruzco, raquis de hoja iguales; lámina más o menos lustrosa

esp. en envés; pedúnculo como petíolo. Frutos trancos, verdes ne-gruzcos. En zona de bosque siempreverde; en orilla boscosa del río Aricuaisá, alrededores de la Estación Hidrológica Aricuaisá-Pie de Monte, 9°35'30" N., 72°53'55" O., Dtto. Perijá, Edo. Zulia, 100-250 m, 1-3 de mayo, 1982 [NY, VZM].

Dracontium changuango Bunt., sp. nov. (Fig. 13, 14)

Herba magna acaulescens usque ad 2.4 m alta. Cormus sub-hemisphaericus infra rotundatus 11-17 cm diam. 9 cm crassus, in margine superiore cormulos ovoideos ferens. Cataphyllum ad 24 cm longum. Folium bene post anthesin prodiens, solitarium umbracu-liforme. Petiolus teres 0.90-2.05 m longus deorsum 4-7 cm diam. prope apicem 1.8 cm diam., brunneus vel nigro-olivaceus vel purpureo-niger maculis brunneolis griseis vel sordide albis no-tatus, praesertim sursum processibus parvulis spinescentibus 0.1-0.2 cm longis praeditus; pars vaginata 11-26 cm longa. Foliorum lamina ambitu ovato-circularis usque ad 1.2 m lata tripartita paulo succulenta (in sicco tenuiter membranacea) adaxiale nitida abaxiale pallide viridis nitidissima interdum fenestris ellipticis perforata ut in *Monstera*, quoque segmento petiolulato (petiolulo patenti maculato spinescenti petiolo simili) irregulatum bi- vel tripinnatifido, segmento centrali 44-72 cm longo 31-69 cm lato di- visionibus majoribus ad apicem interdum bifidis, lobulis ultimis ovatis vel obovatis magnitudine variantibus usque ad 11 cm longis 5 cm vel ultra latis, segmentis lateralibus centrali similibus. Inflorescentiae solitariae raro binae multum ante folia prodeun- tes. Pedunculus subterraneus 9-17 cm longus albus interdum roseo- suffusus cataphyllo 9-12.5 cm longo demum siccanti et persistenti subtentus. Spatha per 1 cm basale interdum subterranea, infra medium convoluta tubo subconico, sursum cochlearis vel cucullata ad apicem erecta vel incurvata, 4-10.5 cm longa, in positione natu- rali tubo 2.5-4 cm longo 2.3-3 cm lato limbo 3.5-6 cm lato, extra impolita ex nigro-purpureo olivacea apicem versus olivacea vel ex brunneo olivacea basim versus brunneola nervis verticalibus principalibus 5-9 luteo-viridibus, intra impolita intense rufo- vinacea vel nigro-olivacea praesertim deorsum pilositatibus minu- tis albis vel cinereis ut videtur farina obducta. Spadix tubo spathae vix longior, stipitatus stipite 0.1-0.3 cm longo, 2.2-3 cm longus 1-1.3 cm diam. sordide brunneolus vel brunneus vel roseus stigmatibus mox paulo exsertis, ad extremitatem processus 1-3 in- fundibuliformes vel petaloideos olivaceos vel violaceos usque ad 0.55 cm longos 0.4-0.7 cm latos gerens. Tepala 6-7 viridi-alba ad apicem viridia violaceo- vel brunneolo-punctulata. Pistillum viridi-luteum ad apicem violaceo- vel brunneolo-punctatum; ovarium (4)-5-6-loculare loculis uniovulatis. Infructescentia stipitata stipite 1.7 cm longo, cylindrica 16 cm longa 5 cm diam. (fere ma- tura) viridis denique vinaceo-brunnea fortasse brunneo-aurantiaca, spatha sicca etiam post liberationem baccarum persistenti. Baccae 4-6-angulares subturbinatae (a latere visae obovatae) apice truncatae centraliter concavae ca. 1.7 cm altae 1.5 cm crassae brunneolo-albae apice fuscae. Semina apostrophiformia dorsaliter

porcata ubique valde verruculosa vel verruculoso-squamata, aurantiaco-brunnea, 0.7-0.9 cm longa 0.6-0.7 cm lata.

TYPUS: George S. Bunting 2856. Inflorescences only produced at this season. Peduncles below ground, and base of spathe as well. Peduncle rosy to white, to 9 cm long, in young infls. with pale pink cataphyll to 9.5 cm long drying in age and persisting. Spathe to 10.5 cm long, convolute basally, cucullate to spoon-shaped upward, outside olive-brownish becoming brownish toward base, nerves yellowish green (4 on each side of midrib), ridged along midrib; inside dark maroon-wine covered especially downward with white "dust" (pilosities). Young spadix dull tan or with apices olive-buff, creamy at base, upper flowers with violet anthers; anthesis appears to start at apex and proceed downward; apically with olive-greenish to violet processes, open and petal-like or tubular and funnelform or variously contorted; spadix to 3 x 1.3 cm; stipe stout, brownish or rosy. A suggestion of fetid odor at night. En bosque semideciduo; al lado de la carretera, Caño Paso Ancho, ca. 6 km al sur de Valencia, cerca de El Paito, Edo. Carabobo, ca. 450 m, 22 de enero, 1968 [Holotypus: MY; isotypus: NY].

PARATYPI: George S. Bunting & Baltasar Trujillo 2221. Herb to 2.4 m tall, umbrella-like. Corm to 17 cm diam. Petiole brown with paler splotches & rather few, spine-like excrescences 1.2 mm long esp. upward; 4 cm thick toward base; petiolules like petioles. Leaf blade to 1.2 m diam., glossy rich green adax., very pale & glossy abax. Fruits to 1.7 cm long, 1.5 cm thick, obovoid, dirty brown at apex, tan-white below. In half-shade in wet, roadside woods near caño, inundated in this season; ib. ut typus, 12 August 1967 [MY]; George S. Bunting & Baltasar Trujillo 2224. Ib. ut typus, 12 August 1967 [NY].

George S. Bunting 4432. Only infructescences present (without foliage), apparently near maturity, to 16.5 cm long and 5 cm thick, stipe 1.5 x 1.5 cm, it and axis of spike pinkish or greenish white, old spathe persistent but dry; with ca. 170 fruits in the largest spadix. Fruits dark brown or green-dotted with brown on apex, each one well defined, outer margins angular, apically flat but for a central concavity; fruits of different lengths (surface of spike thus irregular), to 1.7 x 1.6 cm, becoming green downward and finally white in basal half. En zona boscosa volviéndose pantanosa durante la temporada de lluvias; ib. ut typus, 16 de mayo, 1971 [MY].

Common names: changuango (Carabobo, Guárico); cuma pan (Bolívar). The corm is said to be edible when cooked.

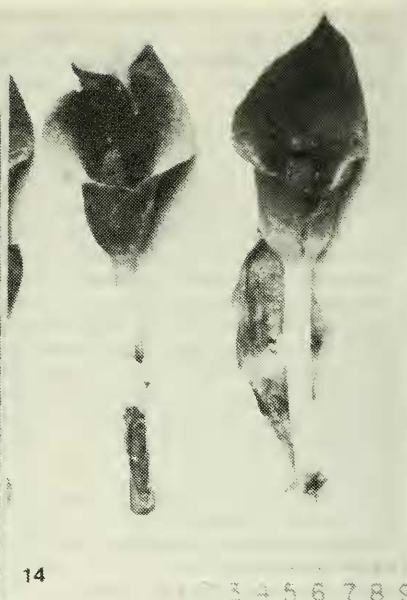
HETEROPSIS

Heteropsis spruceana Schott var. *robusta* Bunt., var. nov. (Fig. 15)

A varietate typica foliis majoribus proportione latioribus differt. Petiolus 0.3-0.7 cm longus, geniculum 0.2-0.4 cm longum.



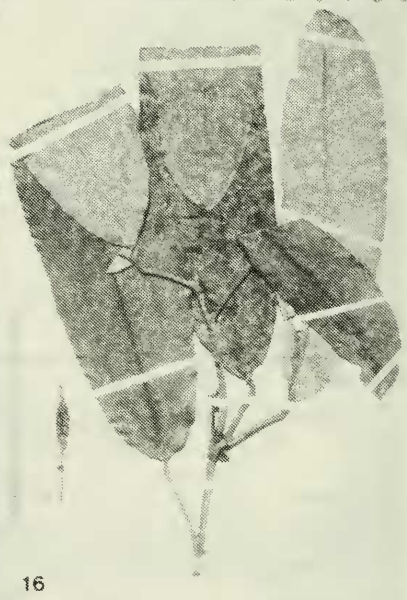
13



14



15



16

Foliorum lamina (acumine 1.2-3.2 cm longo incluso) 11-20 cm longa, 4.2-7.7 cm lata proportione inter longitudinem et latitudinem 2.3-3.6:1 (in varietate typica 3.2-5.4:1).

TYPUS: Francisco Guánchez 61. Utilizadas para amarre de viviendas, confección de tejidos y fabricación de muebles, etc. En manchas, muy frecuente. Bosque alto denso a aprox. 1 km al norte de San Pedro de Cataniapo, a unos 60 km al NE de Puerto Ayacucho, 5°39' N., 67°11' O., Depto. Atures, Territorio Federal Amazonas, 90-110 m, 4 de agosto, 1980 [Holotypus: MYF].

PARATYPUS: Francisco Guánchez 283. Trepadora con raíces aéreas colgantes lignificadas, utilizadas como atadura por los lugareños; frutos color naranja, ovalados, de 1.2 cm de largo x 0.9 cm de diámetro, hojas papiráceas; hasta alturas de 20-25 m; localmente muy frecuente. En bosque alto medianamente intervenido; a 2 km al noroeste del caserío San Pedro de Cataniapo, a unos 60 km al sureste de Puerto Ayacucho, 5°38' N., 67°12' O., Depto. Atures, Territorio Federal Amazonas, 100 m, 4 de noviembre, 1980 [MYF].

Common names: mamure (Spanish); kiyowipo (Piaroa, along Río Cataniapo).

Heteropsis steyermarkii Bunt., sp. nov. (Fig. 16)

Herba usque 7 m scandens. Caules multum ramosi, lignei tenacissimi 0.35-0.6 cm crassi virides postremo brunnescentes scabrelli internodiis 0.3-3 cm longis, gemmis lateralibus longe exsertis (0.3-0.4 cm). Petiolus 3-6.7 cm longus, basi geniculi tenuis vel ultra vaginatus alis stantibus attamen marginibus involutis denique siccantibus brunnescentibus persistentibus; geniculum 0.5-1.7 cm longum. Foliorum lamina pergamena vel subcoriacea autem fragilis oblongo-elliptica vel elliptica aut latissima paulo supra vel infra medium, interdum subfalcata 16-36 cm longa 4.6-10 cm lata, ad basim truncata vel rotundata, ad apicem acuta vel fere obtusa apice ipso acuminata, paululum corrugata, adaxiale impolita nitescens, nervis lateralibus numerosis subaequalibus 0.3-0.4 cm inter se distantibus sub angulo 55-75°(-82°) oreuntibus marginem versus valde arcuatis, abaxiale grisea vel veneto-grisea vel argentea costa luteola; folia nova aenea abaxiale pruinosa. Inflorescentia solitaria terminalis (in ramo patenti vel pendulo 4-10 cm longo) erecta. Pedunculus 1.2-2.2 cm longus ad basim 1-2 bracteis sub anthesi viridibus deinde lutescentibus et caducis. Spatha fusiformi-inflata (acumine 0.2 cm longo incluso) 4.5-7 cm longa ca. 2.2 cm diam. (in positione naturali) 6 cm lata (ubi complanata) marginibus laxantibus vel paulo discedentibus tamen non aperiens, mox caduca, extra viridis vel ex luteo viridis, intra cremicolor. Spadix spipitatus stipite 1.0-1.4 cm longo, ambas extremitates versus angustatus 2.5-3.5 cm longus ad 0.8 cm diam., sub anthesi pallide viridis. Flores apice convexi. Infructescentia matura ad 4.7 cm vel ultra longa 1.5 cm crassa aurantiaca. Baccae ad 0.4 cm longae 0.3-0.7 cm crassae; semina 4-5 apostrophiformia brunnea perpallida foveolata, 0.35-0.38 cm

longa 0.2-0.27 cm lata.

TYPUS: Julian A. Steyermark & George S. Bunting 102607. Climber to 7 m up tree trunk with spreading and pendent branches to 6 mm diam., woody, green becoming brownish in age; lf. blade pergameneous-subcoriaceous, brittle, adax. glossy dark green, slightly corrugated by concavities along nerves, abaxially prominently light gray, rib green-yellow; spathe fusiform-inflated, to 7 cm long, 2.2 cm across, slightly parting but not opening, yellow-pale green outside, inside creamy, early deciduous; spadix 4 x 0.8 cm, light green in anthesis; mature infructescence 1.1 cm diam. A lo largo del río Yatua, margen izquierda, bajando desde el Cerro Araucagua, 1°35' N., 66°10' O., Depto. Río Negro, Territorio Federal Amazonas, 125 m, 11-12 de abril, 1970 [Holotypus: VEN].

PARATYPUS: Julian A. Steyermark & George S. Bunting 103056. Leaves silvery below, dark green above; spadix 3.5 x 1.4 cm, pale gray, apices of individual fruits slightly convex, ca. 4 mm diam. Cerro Yapacana, selva alta en la parte suroeste, desde el Campamento Base hasta las faldas pedregosas, 3°45' N., 66°45' O., Depto. Atabapo, Territorio Federal Amazonas, 125-400 m, 3 de mayo, 1970 [VEN].

Heteropsis tenuispadix Bunt., sp. nov. (Fig. 17)

Herba scandens. Caulis flexuosus 0.3 cm diam. internodiis 3.7-1.8 cm longis (e basi ad apicem), gemmis lateralibus modo emergentibus vel exsertis ad ca. 0.1 cm. Petiolus 0.5-0.8 cm longus; geniculum ca. 0.4 cm longum. Foliorum lamina semicoriacea (in sicco chartaceo-subpergamena), elliptica vel elliptico-obovata, 12-17.5 cm longa 4-7 cm lata, ad basim cuneata vel marginibus paulo rotundatis, ad apicem obtusa et abrupte acuminata (acumine 1.2-1.6 cm longo), nervis lateralibus principalibus 0.4-0.5 cm inter se distantibus sub angulo 63-70° abeuntibus in nervum collectivum a margine 0.1-0.2 cm remotum conjunctis. Rami floriferi laterales 4-6.8 cm longi nodis 3-5, aphylli praeter nodum summum folio parvo mox caduco. Pedunculus (i.e. axis inter folium et insertionem spathae) 0.3 cm longus. Spatha rostrata 2.5 cm longa 2 cm diam. (in sicco, alba. Spadix spatham aequans, stipitatus stipe gracili 0.5 cm longo, anguste ellipsoideus 2.3 cm longus 0.5 cm diam., initio laevis demum asperatus per stylos mamilliformes 0.05 cm longos, albus. Flores apice quadrati vel late rhombici inter margines parallelos 0.2 cm lati.

TYPUS: Paul E. Berry 2189. Epífita con espádice blanco. En bosque de tierra firme; a 3 km al sur de Trapichote, desembocadura del río Ventuari, Territorio Federal Amazonas, ca. 130 m, 28 de marzo, 1976 [Holotypus: VEN; isotypus: MYF].

PHILODENDRON

Philopsammus Bunt., sect. nov.

Cataphylla in situ siccantia plerumque longe persistentia. Petiolus plerumque plus minusve manifeste geniculatus; foliorum

lamina in petiolo arrecta, plerumque coriacea (in vivo), integra, oblonga vel elliptica vel ovata basi nec cordata nec lobis posticis bene formatis, nervis lateralibus omnibus subparallelis saepe primariis vix prominentibus interdum nervis omnibus subaequalibus. Flores pistillati ovario 2(-3)-loculari loculis multi-ovulatis, ovulis e basi ad apicem loculorum superpositis.

TYPUS: Philodendron ptarianum Steyerem., Fieldiana: Botany 28(1): 99. 1951.

Section Philopsamos pertains to the subgenus Philodendron Engl. and appears to have a distribution limited to the Guayana Highland, especially of Venezuela, with extensions into adjacent Guyana, Brazil, and Colombia. In general, the species of this section grow in white sand savannas, on sandstone outcrops, and on the tepuís, although P. phlebodes occurs in lowland forest of Territorio Federal Amazonas, and P. steyermarkii is widely distributed throughout the Guayana region.

The other known species of this section are:

- P. canaimae Bunt.¹
- P. dunstervilleorum Bunt.
- P. dyscarpium Schultes var. dyscarpium
- P. dyscarpium var. ventuarianum Bunt.¹
- P. peraiense Bunt.¹
- P. phlebodes Bunt.
- P. pimichinense Bunt.
- P. remifolium Schultes
- P. sabulosum Bunt.¹
- P. steyermarkii Bunt.
- P. tatei Krause subsp. tatei
- P. tatei subsp. melanochlorum (Bunt.) Bunt.¹

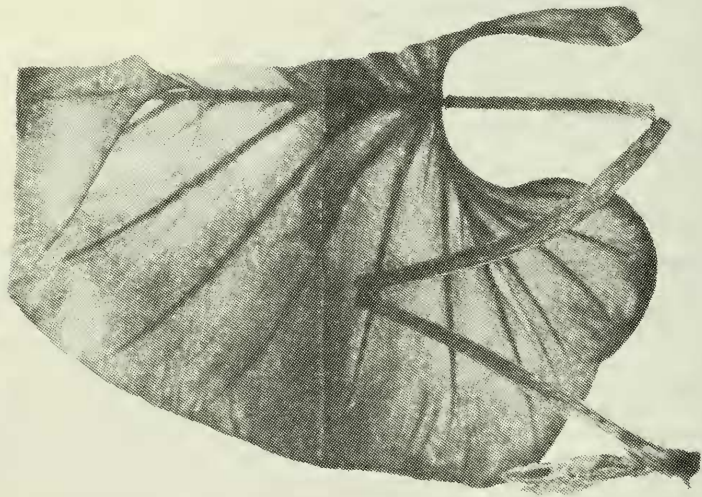
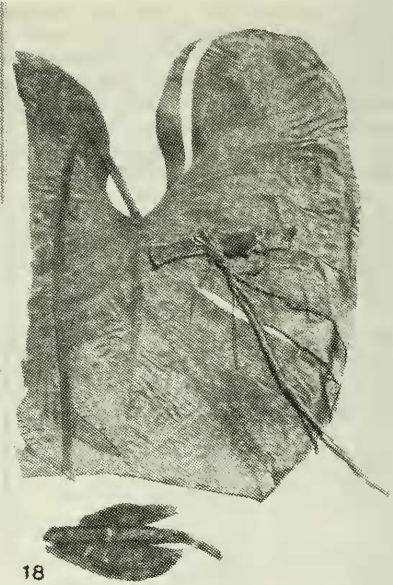
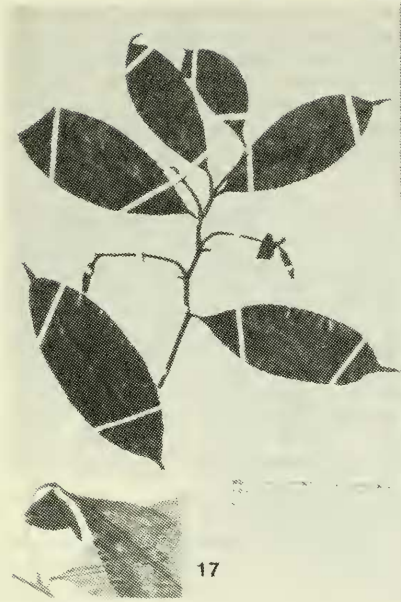
Philodendron callosum Krause may belong here, although it was originally described² as having a plurilocular ovary with the locules few-ovulate. Only a study of the type specimen will resolve the matter. If indeed it corresponds to this section, then P. ptarianum Steyerem. may become a synonym of P. callosum.

Philodendron amplisinum Bunt., sp. nov. (Fig. 19)

Herba scandens. Caulis usque ad 3 m longus 4-7 cm crassus internodiis valde abbreviatis, nudus praeter apicem cataphyllorum reliquiis fibrosis et siccatis tectus. Cataphyllum 22 cm longum. Petiolus solidus subteres ventraliter angulari-convexus vel deorsum planescens, 65-98 cm longus 1.7 cm crassus, niger (in sicco), parte vaginata 4-7 cm longa, per 6 cm distalia plus minusve geniculatus. Foliorum lamina chartacea vel subcoriacea autem fragilis ambitu late ovata 52-77 cm longa 46-57 cm lata, ad basim lobis posticis grandibus semicircularibus sinu hippocrepiformi vel spatulato 15-20 cm longo ad 11 cm lato sejunctis vel raro lo-

¹ described below

² 1913, p. 28.



bis imbricatis sinu clauso et obovato, ad apicem late obtusa ($100-140^\circ$) apice ipso acuminata (4-5 cm), in sicco fusca nervatione principali nigra, costa 0.8 cm lata, nervis lateralibus I. utrinque 5(-6) sub angulo $35-50^\circ$ e costa oreuntibus nervis minoribus ex nervis lateralibus I. inferioribus abeuntibus, nervis validis in uterque lobo postico ca. 5 in costulam in sinu per 5-8.5 cm nudam conjunctis. Inflorescentiae binae. Pedunculus 16-18 cm longus striis interruptis pallidis interdum elevatis prope apicem notatus. Spatha 13-18 cm longa tubo 5.5-8.5 x 2.5-4.3 cm extra atro-viridi limbo extra dilute viridi. Spadix parte pistillata (fructifera) 6-7.3 x 2.5 cm, parte staminata sterili 1.5 cm longa fertili partem pistillatam subaequant. Flores pistillati ovario 3-5-loculari, ovulis in quoque loculo numerosis superpositis. Flores staminati 5-4-andri. Baccae 0.9 cm longae.

TYPUS: Julian A. Steyermark, Gerrit Davidse & A. Stoddart 122689. Climbing; leaves silvery below, rich green above; spathe pale green; peduncle terete, green. Along shore of lagunita, lower slopes (northwest side) of Cerro Negro, following quebrada to Lagunita Araguaney, southeast of Río Guasare, 2.5-3 km (by air) southeast of Rancho 505, $10^\circ 55' 30''$ N., $72^\circ 25'$ W., Dto. Mara, Edo. Zulia, 400-530 m, 28 May 1980 [Holotypus: VEN].

PARATYPUS: George S. Bunting & R.A. León 12848. Hierba trepadora. Entrenudos cortos. Catafilo volviéndose fibroso y persistente. Pecíolo terete. Dos inflorescencias por hoja. En zona de bosque húmedo ahora parcialmente talado, con mucho Sabal sp.; cuenca del río Guasare: alrededores del Destacamento Guasare No. 1 (La Yolanda), $10^\circ 52' 10''$ N., $72^\circ 29' 30''$ O., en laderas del cerro en la orilla izquierda del Guasare, ca. 1 km río abajo del Destacamento, Dto. Mara, Edo. Zulia, 400-500 m, 9 de diciembre, 1982 [NY, VZM].

Pertains to Section Polyspermium Engl.

Philodendron anaadu Bunt., sp. nov. (Fig. 18)

Herba scandens. Caulis 1.7 cm diam. internodiis 2.5-4 cm longis. Petiolus 48 cm longus. Foliorum lamina tenuiter papyracea (in sicco) ambitu ovata, ad basim cordata, ad apicem acuminata (1.5 cm), ad 45-52 cm longa 32-35 cm lata nervis lateralibus I. costalibus utrinque 7 sub angulo $50-55^\circ$ oreuntibus, lobis posticis semicircularibus marginibus paulo repandis sinu spathulato 12.5-14.5 cm longo 4.5-6 cm lato sejunctis nervis validis ca. 6-7 in costulam in sinu per 2.5-3.5 cm nudam conjunctis; abaxiale velut pulvere obducta propter punctula multissima pusilla pallida paulo elevata praesertim secus nervos principales et margines versus et in parte inferiore petioli (manifesta sine lente). Inflorescentia solitaria. Pedunculus 4 cm longus. Spatha 12 cm longa tubo ex limbo vix discreto. Spadix spatham aequans, stipitatus stipite 1-1.5 cm longo, parte pistillata 5.3 cm longa, parte staminata sterili 0.4 cm longa fertili 5.6 cm longa.

TYPUS: Francisco Delascio Ch. & Francisco Guánchez 10916. Trepadora. Espata blanca. Salto Yureba, Caño Yureba, bajo río Ventuari, $4^\circ 3'$ N., $66^\circ 1'$ O., Depto. Atabapo, Territorio Federal

Amazonas, 120-150 m, 24 octubre-4 noviembre, 1981 [Holotypus: VEN].

PARATYPUS: Julian A. Steyermark & Francisco Delascio 129149. Trepadora, alrededor de las casas. El latex del peciolo podrido calentado en el fuego se aplica para quitar los hongos de la piel. Vecindad de la comunidad de Culebra, río Cunucunuma, 3°40' N., 65°45' O., Depto. Atabapo, Territorio Federal Amazonas, 200-220 m, 22-23 y 28-29 de marzo y 1-4 de abril, 1983 [VEN].

Common name: anaadú (Yekuana, subtribe of Makiritare).

Philodendron appunii Bunt., sp. nov. (Fig. 20)

Herba scandens. Caulis usque 3.6 cm diam. internodiis florentibus 3-5 cm vel ultra longis. Cataphyllum 31 cm longum mature cadens. Petiolus subteres sed adaxiale plano-convexus prope apicem plus minusve 3-gonus, 37-44 cm longus, in medio 1.3 cm crassus apicem versus rubens, parte vaginata 4.5-8 cm longa latero altero vaginae prope apicem usque ad 2.2 cm lato. Foliorum lamina in petiolo arrecta, coriacea ambitu ovato-triangularis, usque 43-59 cm longa 18.5-25.5 cm lata, ad apicem obtusa apice ipso acuminata (2 cm), ad basim subsagittata lobulis posticis apice obtusis sinu parabolico 8.5 cm profundo sejunctis, margine externo lobuli alterius valde concavo alterius convexo, nervis lateralibus 1. utrinque 6-7 sub angulo 65-80° abeuntibus abaxiale rubenibus, nervis minoribus omnibus subparallelis. Inflorescentiae usque quinae. Pedunculus 7.5-9 cm longus. Spatha 14-15.5 cm longa tubo 7 x 2-2.3 cm extra kermesino limbo viridi sursum eburnescenti kermesino-suffuso vel -punctato, intra tubo saturate cerasino colore in basim limbi continuo sursum limbo eburneo. Spadix spatham subaequans, stipitatus stipite roseo postice 0.3 cm antice 0.8 cm longo, parte pistillata 4.2 cm longa, parte staminata sterili 1.2 cm longa fertili 6.5 cm longa. Flores pistillati ovario 6-7-loculari loculis uniovulatis. Flores staminati 4-3-andri.

TYPUS: George S. Bunting, Julian A. Steyermark & R. L. Dressler 2147. Climber. Leaf blade rather thick-leathery, adax. dark green, glaucescent and glossy if rubbed, rib slightly convex, I.'s channeled, abax. I.'s reddish. Petiole subterete but adax. flattened-convex. Spathe tube red outside, inside deep cherry-crimson with color extended onto limb briefly with some red lines reaching to midpoint of cream-colored limb. Carretera Colonia Tovar-Hacienda El Limón, several kms below the empalme with carretera Colonia Tovar-Caracas, Distrito Federal, 29 April 1967 [Holotypus: NY; isotypi: MO, US, VEN].

Pertains to Section Oligospermium Engl.

Philodendron borgesii Bunt., sp. nov. (Fig. 21)

Herba scandens. Caulis usque ad 3 m longus 4 cm diam. internodiis 3.5-5.5 cm longis. Cataphyllum crassum 21-40 cm longum viride pallidum supra medium roseo-suffusum mox fatiscens et sensim solutum. Petiolus robustus spongiosus in stirpe juvenili valde tumidus, teres usque ad 78 cm longus ad apicem 1.5 cm cras-

sus deorsum 2 cm crassus, parte vaginata 6-8.7 cm longa. Foliorum lamina subcoriacea ambitu late ovata 47-68 cm longa 38-53 cm lata, ad basim cordata lobis posticis rotundatis vel obtuse angulatis uterque lobo 14-25 cm lato sinu spathulato vel obovato 14-20 cm profundo sejunctis, ad apicem obtusa apice ipso acuminata (1.0-1.5 cm), in ambabus superficiebus nitida, adaxiale costa plana nervis lateralibus I. sulcatis utrinque 5-7 sub angulo 55-58° oreuntibus, nervis validis ex uterque costula utrinque 2-3 abeuntibus costulis in sinu per 3.2-5.4 cm nudis. Inflorescentiae ternae. Pedunculus ad 13 cm longus. Spatha 17.5 cm longa tubo 9.5 x 3.8 cm extra viridi limbo e viridi albo, intra ubique intense vinosa (saltem in tubo). Spadix usque 16 cm longus sessilis attamen axe antice per 1 cm nudo. Flores pistillati ovario 8-9-loculari, ovulis in quoque loculo 3-5 supra basim affixis. Flores staminati (e basi ad apicem spadicis) 6-4(-3)-andri. Infructescencia 9.8 x 2.5 cm. Baccae 0.4-0.5 cm longae, ad apicem truncatae, cremicolores, seminibus ellipsoideis 1.4 x 0.65 mm laevibus luteo-brunneis.

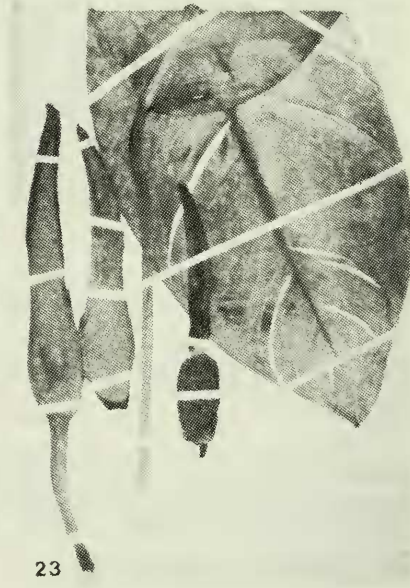
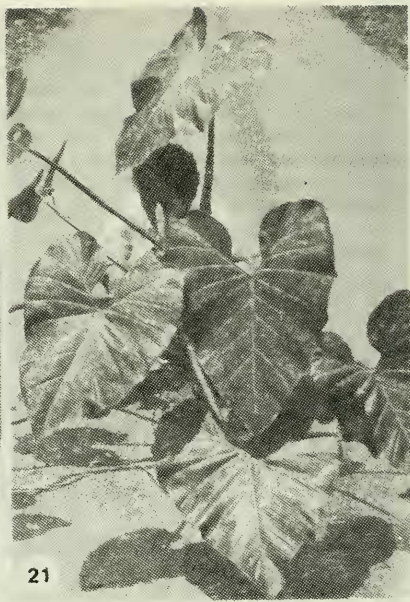
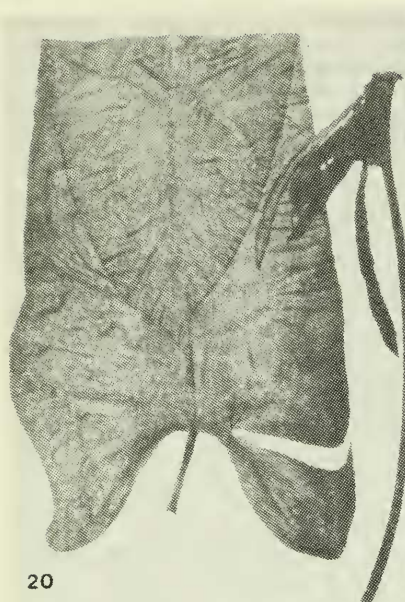
TYPUS: George S. Bunting & Gustavo Borges M. 13030. Large climber about 3 m up on tree trunk. Cataphyll early deteriorating and sloughing off little by little. Internodes scarcely longer than diameter of stem. Petiole nearly terete, stout, strongly tumid in juvenile plants. Lamina subcoriaceous, glossy on both faces, undulate. Three inflorescences together. Spathe tube medium green outside and limb greenish white in anthesis, inside spathe dark red overall (including limb). En bosque húmedo montano siempreverde; carretera San Cristóbal-Chorro del Indio-Caño Seco-La Florida, en km 25 del trayecto al este de San Cristóbal, Dto. San Cristóbal, Edo. Táchira, ca. 1100 m, 7 de junio, 1973 [Holotypus: NY; isotypi: K, MO, VEN, US].

PARATYPUS: George S. Bunting 13394. Hierba trepando 2,5 m en tronco, en bosque. Tallo x 4 cm, entrenudos hasta 4-5,5 cm de largo. Lámina foliar más o menos coriácea, lustrosa en ambas caras, nervios medio y basales en parte inferior con manchitas moradas, así como pecíolo en mitad superior. Pecíolo en ápice 1,5 cm de ancho y 1,1 cm de grosor, por encima de la parte vaginada 2,3 x 2 cm. Tres inflorescencias juntas. Espata 17,5 cm de largo, tubo 9,5 x 3,8 cm, verde afuera pero tubo mostrando sombra del color vino de su cara interna que extiende 2/3 de longitud del mismo. Infructescencia 9,8 x 2,5 cm, cremosa, frutos 5 mm de alto. En bosque siempreverde; vía San Cristóbal-Chorro del Indio-La Florida (al este de San Cristóbal), entre km 14-20 de la vía (3-9 km al este del Chorro), Dto. San Cristóbal, Edo. Táchira, ca. 1100 m, 26 de febrero, 1985 [MO, NY, VEN].

Pertains to Section Oligospermium Engl. Philodendron borgesii superficially resembles P. grandifolium (Jacq.) Schott, but there are many differences. The epithet honors Julio Gustavo Borges M., naturalist and professor, of Palmira, Edo. Táchira.

Philodendron calatheifolium Bunt., sp. nov. (Fig. 22)

Herba usque ad 3 m scandens ramis pendentibus. Caules virides argenteo-grisei transeuntes, 1.6-2.2 cm crassi internodiis in



stirpibus adultis vegetativis usque ad 7.5 cm longis in stirpibus florentibus tantum 2.5 cm longis. Cataphyllum 13-16.5 cm longum, caducum. Petiolus 24-28 cm longus manifeste alatus late patentibus vel stantibus persistentibus etsi marginibus siccantibus, ad 2.4 cm latus (3.4 cm latus in folio inflorescentiam subtendenti), parte non alata subterete attamen adaxiale anguste sulcata 3.5-8 cm longa; geniculum vix manifestum. Foliorum lamina aliquantum tenuis late ovata 21-39 cm longa 15-26.5 cm lata, ad basim truncata vel subcordata sinu aperto ad 1.4 cm profundo, ad apicem late obtusa et abrupte acuminata (ad 1.3 cm), in ambabus superficiebus impolita, adaxiale smaragdina costa concava 0.3 cm lata, nervis lateralibus I. costalibus utrinque 11-14 sub angulo 62-75° abeuntibus sed mox insigniter arcuatis, abaxiale costa angulari-convexa. Inflorescentiae solum in ramis pendentibus prodeuntibus, binae, usque ad 24 cm longae. Pedunculus 5-6 cm longus striis interruptis albidis leviter elevatis prope apicem notatus. Spatha 10.5-16.5 cm longa tubo 5.0-8.6 x 2.4-2.8 cm, extra ubique intense viridis intra viridis pallidior, post demum tubo luteo. Spadix spatha 0.5-1.3 cm brevior, stipitatus stipite postice 0.5 cm antice 1.7 cm longo. Baccae immaturae obovoideae ad apicem obtusae et virides deorsum albae, 0.55 x 0.35 cm.

TYPUS: George S. Bunting & Gustavo Borges M. 5002. Climber on tree trunk to 3 m with stem tips pendent and flowering. Stem to 2.2 cm diam. with internodes becoming olive-gray and shiny. Petiole wings widely spreading to somewhat ascending, inequilateral, 2.4 cm across, petiole subtending inflorescence 3.4 cm across wings, edges drying light brown. Blade held at right angle to petiole, thin but firm, matte on both faces, with 12-13 l.'s/side. Largest inflorescence 24 cm long. Peduncle with slightly elevated long whitish dashes; spathe rich green 16.5 cm long, tube approx. 8 cm long and 2.4-2.8 cm diam. En bosque original siempreverde; carretera San Cristóbal-Chorro del Indio-Caño Seco-La Florida, entre km 20-22 (al este de San Cristóbal), Dtto. San Cristóbal, Edo. Táchira, 1100-1125 m, 6 de marzo, 1977 [Holotypus: NY; isotypi: K, MO, VEN].

Pertains to Section Pteromischum Schott.

Philodendron canaimae Bunt., sp. nov. (Fig. 23)

Herba terrestris. Caulis plus minusve horizontalis, elongatus attamen internodiis in parte distali brevibus, cataphyllorum reliquiis plus minusve occultus. Cataphyllum in situ siccans paulatim rumpens et solutum. Petiolus erectus laevis subteres adaxiale sulcatus marginibus canalis angulatis, 38-55 cm longus in medio 1 cm diam., multis punctis roseo-purpureis et ad apicem purpureo-brunneus notatus. Foliorum lamina in petiolo arrecta, coriacea plerumque elliptica vel elliptico-ovata 32-41 cm longa 19-21 cm lata, ad basim truncata vel late obtusa, ad apicem breviter acuminata (1.5 cm), adaxiale nitida intense viridis costa convexa ad basim 1 cm lata nervis lateralibus I. utrinque 7-9 sub angulo 50-60° oreuntibus in vivo leviter sulcatis in sicco fere invisibilibus,

abaxiale impolita costa luteola roseo-punctata nervis lateralibus I. in vivo leviter elevatis in sicco vix visibilibus, nervis minoribus plurimis subaequalibus bene notatis. Inflorescentia solitaria(?). Pedunculus pallide viridis 11 cm longus. Spatha 15 cm longa tubo 5.8 cm longo extra albo dorsaliter rubro-punctato intra sanguineo, limbo in ambabus superficiebus albo, sub fructu 23 cm longa tubo 8.5 cm longo viridenti. Spadix spatham paulo superans, stipitatus stipite 0.5-1 cm longo, parte pistillata 2.8 cm longa, parte staminata sterili 1.3 cm longa fertili 9.5 cm longa, sub fructu parte pistillata 6.3 x 3.2 cm. Baccae 0.7 x 0.3 cm. Semina ambitu elliptica vel elliptico-ovata 0.8-1 mm longa, rubro-brunnea dense albo-striata.

TYPUS: Julian A. Steyermark 106396. Terrestrial with elongate stem. Peduncle pale green. Spathe pale or olive green without, dull brown within; leaves coriaceous, ascending or erect, deep green both sides with conspicuous thickened marginal buff nerve. Vecindad del campamento "Ucaima" de Rudy Truffino, a lo largo o en la región del río Carrao, al sureste de Canaima, 6°14' N., 62°45' O., Edo. Bolívar, 450 m, 13-14 de julio, 1971 [Holotypus: VEN].

Pertains to Section Philopsammos Bunt.

Philodendron cataniapoense Bunt., sp. nov. (Fig. 24)

Herba scandens. Caulis gracilis 0.9 cm diam., brunneus pallidus valde nitidus internodiis ca. 5 cm longis. Petiolus 38 cm longus parte vaginata 3 cm longa, in stirpibus juvenilibus tumidus. Foliorum lamina papyracea (in sicco), tripartita; lobus centralis obovatus 27 cm longus 11 cm latus (in loco 15 cm supra basim costae), basim versus 3.2 cm latus (in loco 3 cm supra basim costae), apice acuminata (2-2.5 cm), adaxiale costa prope basim 0.6-0.7 cm lata nervis lateralibus I. utrinque ca. 5 sub angulo 55-60° abeuntibus marginem versus insigniter arcuatis; lobi laterales late patentes ambitu plus minusve elliptici ad 16.5 cm longi 4-5 cm lati (in stirpibus juvenilibus breviores et latiores, quam lobus anticus ultra dimidio breviores), basim versus angustati 2-2.3 cm lati, sursum attenuati autem apice obtusi, costulis angulum ca. 180° faceuntibus latere externo haud vel per 1.3 cm nudis. Inflorescentia solitaria. Pedunculus 11.5 cm longus. Spatha 10.6 cm longa tubo ca. 7 cm longo. Spadix spatha longior, sessilis, attamen basi axe antice breviter nudo. Flores pistillati ovario 5-loculari localis uniovulatis. Flores staminata ut videtur 4-andri.

TYPUS: Julian A. Steyermark, Gerrit Davidse & Francisco Guánchez 122235. Climbing; spathe green. Flooded forest downstream from dam site, virgin rainforest along Río Cataniapo, on north side of river at dam site, 48 km southeast of Pto. Ayacucho, 5°35' N., 67°15' W., Territorio Federal Amazonas, 200-300 m, 10 May 1980 [Holotypus: VEN].

Pertains to Section Oligospermium Engl. § Doratophyllum Engl.

Philodendron consobrinum Bunt., sp. nov. (Fig. 25)

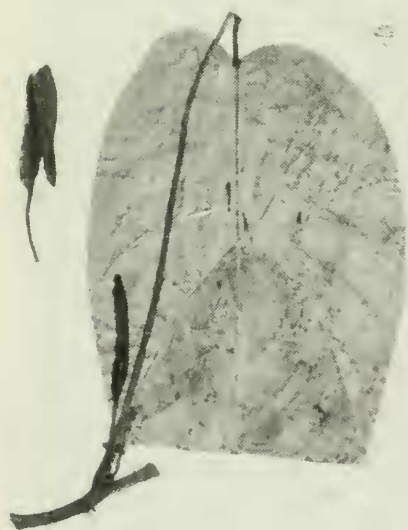
Herba scandens usque ad 8 m. Caulis 2.4-2.6 cm diam., nudus.



24



25



26



27

Cataphyllum 32 cm longum, caducum. Petiolus teres (34-)40-54 cm longus, in medio 1 cm crassus viridis prope apicem abaxiale atropurpureus, parte vaginata 3.5-6 cm longa. Foliorum lamina pergamenosemicoriacea autem fragilis ambitu ovata, 33-47 cm longa 22-32 cm lata, ad basim cordata lobis posticis semicircularibus (plerumque lobo altero quam alterum 1-2 cm longiore) sinu anguste parabolico (raro spathulato) 6.5-10 cm profundo sejunctis, ad apicem plus minusve obtusa apice ipso acuminata (1-2 cm), adaxiale costa prope basim 0.7-0.9 cm lata nervis validioribus sulcatis, nervis lateralibus 1. costalibus utrinque 4-5 sub angulo 55-65° abeuntibus, nervis principalibus in uterque lobo postico 3-4. Inflorescentiae quaternae. Pedunculus 5 cm longus. Spatha 9 cm longa tubo 4.3 x 1.8 cm extra brunneo-rubro margine cremicolori 0.3 cm lato, limbo e viridi cremicolori, intra tubo subvincta limbo cremicolori. Spadix spatha 1.8 cm brevior, stipitatus stipite postice 0.2 cm antice 0.5-0.7 cm longo, 6.7 cm longus, parte pistillata 3.9 cm longa, parte staminata 2.8 cm longa. Flores pistillati ovario (4-)5-6-loculari loculis 1-2-ovulatis, ovulis prope basim affixis. Flores staminati 5-3-andri. Infructescentia pedunculo 6 cm longo, spatha 9.7 cm longa tubo 5.5 x 2 cm, parte pistillata spadicis 7.7 x 2.2 cm. Baccae e viridi cremicolores ad apicem truncato-concavae, 0.6 x 0.4 cm.

TYPUS: George S. Bunting 4951. Climber up tree some 8 m. Stem clean, green with silvery coating. Cataphyll pale green with yellow cast, paling on margin, white inside. Petiole terete, dark violet near apex abaxially. Blade flat, in nearly same plane as petiole, firm, brittle, rich green adax., yellow-edged, rib slightly convex x 7(-9) mm near base; larger veins sulcate. Inflorescences 4 together. Spathe tube outside maroon with a 3 mm-wide cream border; limb creamy with slight greenish cast, 1.9 cm longer than spadix; inside tube light wine color, limb cream. Maturing infructescentia greenish cream. En bosque abierto; entre Villa Páez y Betania, Dtto. Junín, Edo. Táchira, 2050-2350 m, octubre, 1975 [Holotypus: NY; isotypi: K, MO, VEN].

Pertains to Section Oligospermium Engl.

Philodendron davidsei Bunt., sp. nov. (Fig. 26)

Herba scandens. Caulis elongatus 0.9 cm diam. internodiis minimum 5 cm longis, nudus. Petiolus plus minusve gracilis 33.5-37 cm longus parte vaginata 4.3-5 cm longa; geniculum ut videtur 3.2 cm longum. Foliorum lamina in petiolo arrecta, papyracea plana ambitu ovata, 43-45.5 cm longa 20.5-22.5 cm lata (in loco 11-13 cm supra insertionem petioli), ad basim subcordata lobulis rotundatis inaequalibus sinu triangulari tantum 1.0-1.5 cm profundo sejunctis, ad apicem plus minusve obtusa apice ipso anguste acuminata (1.5-2 cm), adaxiale nitida atroviridis costa bene notata nervis lateralibus 1. leviter sulcatis utrinque ca. 10 sub angulo (70°-) 75° prodeuntibus, nervis minoribus subparallelis. Inflorescentia solitaria. Pedunculus gracilis 4.8 cm longus. Spatha plus minusve gracilis 9 cm longa ubique ejusdem diametri extra(?) carminea. Spadix spatha paulo brevior, gracilis axe per basim 0.2 cm nudo, parte

pistillata 2.9 cm longa, parte staminata sterili ca. 1.5 cm longa fertili 3.5 cm longa. Flores pistillati ovario 6-loculari loculis 3-4-ovulatis, ovulis basim versus centraliter affixis. Flores staminati (e basi ad apicem spadicis) ut videtur 4-3-2-andri.

TYPUS: Gerrit Davidse, Angel C. González & R.A. León 18702. Climbing vine; leaves dark shiny green above, nerves slightly impressed, dull medium green below with main nerves elevated; spathe carmine red; fruit orange. Steep, low hills with primary semi-evergreen forest; along quebrada, 3 km E of the Río de Oro settlement on the Río de Oro, ca. 9°8' N., 72°52' W., Dpto. Colón, Edo. Zulia, 100-250 m, 27 June 1980 [Holotypus: VZM; isotypus: VEN].

Probably pertains to Section Boursia Reichb.

Philodendron delascioi Bunt., sp. nov. (Fig. 27)

Herba scandens. Caulis gracilis 0.6-0.8 cm crassus (in sicco) internodiis 4.7-8.5 cm longis, multissimis excrescentiis spinosis tenuissimis deorsum curvatis ad 0.1 cm longis instructus. Petiolus plus minusve gracilis laevis 11-14(-22) cm longus parte vaginata tantum 1 cm longa. Foliorum lamina in petiolo arrecta, papyracea attamen plus minusve rigida (in sicco), hastata 20-23 cm longa 17.5-22 cm lata (trans lobos basales mensa), ad basim sinu apertissimo 1-2.5 cm profundo; lobus anticus triangulari-ovatus sursum longe attenuatus apice ipso acuminatus, deorsum 8-9 cm latus attingens unde in lobos laterales dilatatus, nervis lateralibus I. costalibus utrinque 4 sub angulo 50-55° exeuntibus, multis nervis minoribus parallelis inter I. oreuntibus; lobi laterales plus minusve triangulares ad apicem obtusi quam lobus anticus semper minores, costulis patentibus (in sinu haud nudis) nervis lateralibus validis utrinque costulae 2 in uterque lobo prodeuntibus. Inflorescentia ignota.

TYPUS: Julian A. Steyermark, Ronald Liesner & Francisco Delascio 114387. Climbing among herbs in savanna. Burns the skin. Mixed evergreen forest of low to medium-sized trees, rich in epiphytes, bordering extensive savanna; Caño Simoína, west of Isla Cocuina, south of Barra de Cocuina, 9°45' N., 61°53' W., Depto. Pedernales (boundary with Depto. Tucupita), Territorio Federal Delta Amacuro [Holotypus: VEN].

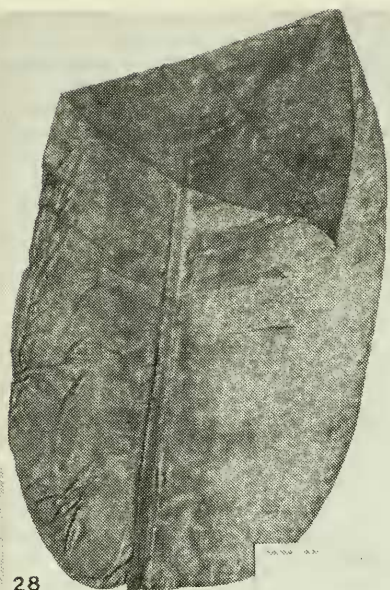
Common name: nautoto.

Philodendron dyscarpium Schultes var. **ventuarianum** Bunting, var. nov. (Fig. 28)

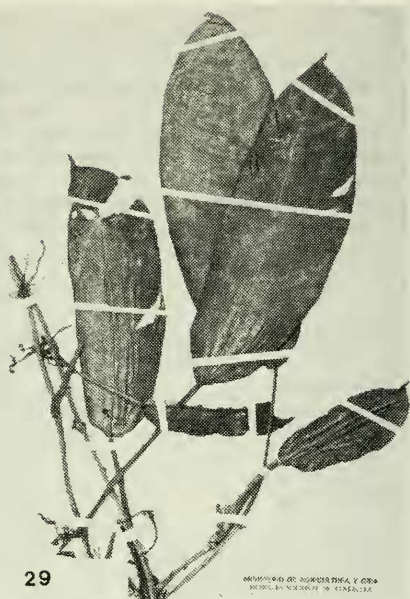
A var. dyscarpio distinguitur magnitudine majore omnium partium et foliorum lamina plus minusve elliptico-ovata maxime inaequilatera marginibus lateralibus in parte centrali fere rectis vel vix convexis et nervis lateralibus latius patentibus.

TYPUS: Bassett Maguire & Celia K. Maguire 35539. Along banks of Río Ventuari, 3 hours below Las Carmelitas, Territorio Federal Amazonas, 100 m, March 10, 1953 [Holotypus: NY].

Pertains to Section Philopsammos Bunt.

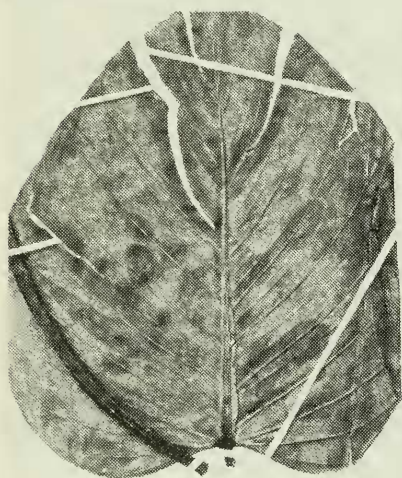


28



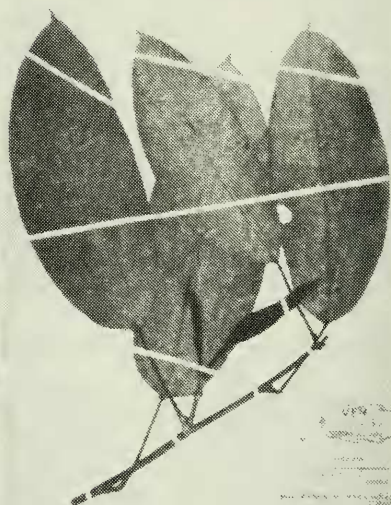
29

HERBARIUM DE BOURBONNE Y OSA
MUSEO NACIONAL DE HISTORIA



30

HERBARIUM DE BOURBONNE Y OSA



31

HERBARIUM DE BOURBONNE Y OSA
MUSEO NACIONAL DE HISTORIA

Philodendron exile Bunt., sp. nov. (Fig. 29)

Herba exilis scandens. Caulis 0.35 cm crassus, stramineus (in sicco) internodiis 4-11 cm longis. Petiolus 4-11 cm longus fere vel prorsus usque ad basim laminae alatus; alae graciles etsi altera ad apicem ca. 0.6 cm lata altera non nisi 0.2 cm lata, erectae (initio involutae) marginibus irregulariter scariosis paulatim solutis; geniculum 0.4-0.6 cm longum. Foliorum lamina papyracea elliptica vel anguste ovato-elliptica valde inaequilatera interdum paulo falcata, margine altero fere recto altero perspicue convexo, 11-12 cm longa 3.7-7.9 cm lata (2.5-3plo longior quam latior), ad basim truncata (raro obtusa vel emarginata), sursum attenuata apice acuminata, nervis lateralibus I. debilibus utrinque 6-8 sub angulo 60-70° exeuntibus. Inflorescentia solitaria. Pedunculus 2.5 cm longus. Spatha 7.3-8.2+ cm longa (parte apicali carenti) viridis pallida tubo ca. 3.5 cm longo bene discreto. Spadix spatha paulo brevior, 7 cm longus, stipitatus stipite postice 0.6 cm antice 1.1 cm longo, parte pistillata 2.8 cm longa parte staminata 4.2 cm longa (parte sterili non distinguibili).

TYPUS: Julian A. Steyermark 107149. Climbing; leaves papyraceous, dull green. Vecindades de Simarawochi, río Matacuni, 3°49' N., 64°36' O., a 6-7 km al oeste de la frontera venezolano-brasilera, 795-830 m, 19 de abril-23 de mayo, 1973 [Holotypus: VEN].

PARATYPUS: Julian A. Steyermark 107012. Low climber; leaves papyraceous, spathe pale green. Ib. ut typus, 19 de abril-23 de mayo, 1973 [VEN].

Pertains to Section Pteromischum Schott.

Philodendron guaiquinimae Bunt., sp. nov. (Fig. 30)

Herba probabiliter terrestris. Caulis ut videtur brevis. Petiolus robustus 25 cm longus (in specimine, sed fortasse incompletus) adaxiale late canaliculatus. Foliorum lamina crasso-coriacea late ovata 32.5 cm longa 29.5 cm lata (in loco 10.5 cm supra basim costae), ad basim subcordata sinu aperto 2 cm profundo, ad apicem late obtusa apice ipso brevissime acuminata, adaxiale nitida nervis lateralibus I. sulcatis utrinque 8-9, abaxiale impolita costa et nervis lateralibus I. valde elevatis, II. et III. minus elevatis. Inflorescentia ignota.

TYPUS: Julian A. Steyermark, G.C.K. & E. Dunsterville 113297. Leaf thick, coriaceous. Plant attached to bluff on side opposite camp site. Cumbre del Cerro Guaiquinima, lomas bosqueadas entre el río Szczerbanari (río Carapo) y el pie de los peñascos de arenisca al sur del río, 5°44'4" N., 63°41'8" O., Edo. Bolívar, 750-840 m, 23 de enero, 1977 [Holotypus: VEN].

Philodendron inaequilaterum Liebm. subsp. **anthoblastum** Bunt., subsp. nov. (Fig. 31)

Differt a subspecie typica caule ex luteo brunneo, ramo speciali florifero laterali ut in Heteropsis 3.5 cm longo nodis 4 praeter cataphyllum tenue 1.8 cm longum in nodo secundato nudo, spadix axe inter parte staminata sterili et fertili nudo.

TYPUS: Gerrit Davidse, Otto Huber & S.S. Tillett 16818. Vine

creeping up tree trunk, in forest. Siquita, sandy forested eastern bank of Río Orinoco, 4°13' N., 67°47' W., Depto. Atures, Territorio Federal Amazonas, 90 m, 28 April 1979 [Holotypus: VEN].

Pertains to Section Pteromischum Schott. It is curious that this species is not represented by any other collections that I have seen from the Territorio Federal Amazonas.

Philodendron liesneri Bunt., sp. nov. (Fig. 32)

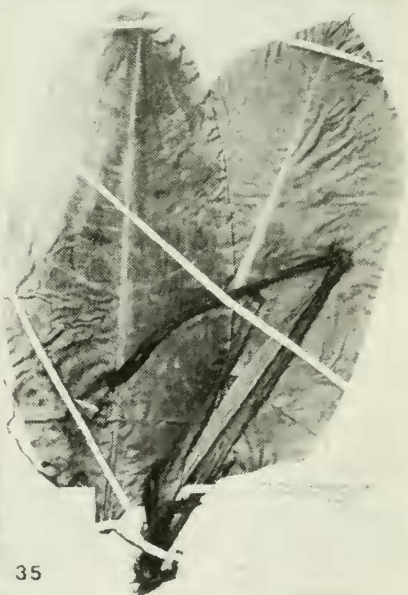
Herba scandens. Caulis usque ad 3 m longus 1 cm diam. (in sicco), laevis nitidus internodiis 4-7 cm longis in latere uno valde applanatis. Cataphyllum tenue 16.5 cm longum. Petiolus aliquantum spongiosus subteres sed adaxiale late canaliculatus marginibus canalis angularibus, 20-24 cm longus 0.9 cm crassus (in medio). Foliorum lamina in petiolo arrecta, chartacea (in sicco membranacea) oblongo-elliptica vel ovata 32 cm longa 12.3-14.5 cm lata, ad basim truncata vel parum emarginata (in vivo) valde obligna (in sicco), ad apicem plus minusve obtusa apice ipso acuminata, in ambabus superficiebus nitida, adaxiale laete viridis costa deorsum plana 0.6 cm lata sursum elevata nervis lateralibus I. sulcatis utrinque 7-8 sub angulo 70-75° exeuntibus. Inflorescentiae (in specimine novellae) binae. Pedunculus 2 cm longus. Spatha 9.5 cm longa tubo praeter colorem nondum distinguibili, in parte inferiore vinacea superiore viridis. Flores pistillati ovario 7-8-loculari, oculis probabiliter uniovulatis (ovula non visa).

TYPUS: Julian A. Steyermark & George S. Bunting 102673. Climber 3 m on tree trunk. Stem flat-convex on one side between each node; petiole somewhat spongy, more or less terete but adax. wide concave-channeled, x 9 mm at midpt.; lf. blade thin but firm, in same plane with petiole, glossy on both surfaces, adax. bright green with flat midrib; inflorescences paired (quite young). Spathe 9.5 cm long, wine on tube, green on limb. A lo largo del río Casiquiare, entre Pueblo Viejo y San Carlos de Río Negro, 1°57' N., 66°50' O., en San Sebastián, solamente 15 minutos arriba de la desembocadura del río, Territorio Federal Amazonas, 125 m, 16 de abril, 1970 [Holotypus: VEN].

Probably pertains to Section Oligospermium Engl.

Philodendron marahuacae Bunt., sp. nov. (Fig. 33)

Herba parva. Caulis 30 cm longus usque ad 1.3 cm diam. nudus internodiis 0.8-1.3 cm longis, foliis prope apicem congestis. Cataphyllum 11.5 cm longum plus minusve caducum (licet cataphyllum reliquiis tenuibus paulo fibrosis ad caulem adhaerentibus). Petiolus 23-29 cm longus. Foliorum lamina chartacea ambitu ovata 20-23 cm longa 8-9.3 cm lata (in loco 4.3-5 cm supra insertionem petioli), ad basim cordata lobis posticis sinu triangulari 1.0-2.1 cm profundo sejunctis, nervis lateralibus I. utrinque ca. 4 superioribus sub angulo 30-40° exeuntibus inferioribus latius extensis, nervis II. et minoribus totis subparallelis. Inflorescentia ignota.



TYPUS: Julian A. Steyermark 129688. Terrestrial in mossy recumbent forest; bosque enano musgoso con ramas semidecumbentes y entrecruzadas, Macizo de Marahuaka, laderas que miran al suroeste, cabeceras del río Iguapo, sector meridional de la Meseta Sureste, 3°36' N., 65°23'10" O., Territorio Federal Amazonas, 1560 m, 13-14 de octubre, 1983 [Holotypus: VEN].

There is some question if the type specimen is adult, although its overall size suggests that it may be. The lack of visible peduncle scars on the stem lends no credence to the argument.

Philodendron multinervum Bunt., sp. nov. (Fig. 34)

Herba scandens. Caulis . . . Petiolus 39 cm longus parte vaginata 6 cm longa. Foliorum lamina papyracea (in sicco membranacea) ambitu plus minusve triangularis modice inaequilatera, prope medium margine latere angustiore convexo latere altero concavo, 37.5 cm longa 17.5 cm lata (insertione petioli opposita), ad basim plus minusve sagittato-cordata lobis posticis rotundatis sinu late parabolico 5.5 cm longo sejunctis, lobo altero 7 cm longo quam alterum 2.5 cm longiore, adaxiale obscure viridis costa prope basim 0.8 cm lata (in sicco), nervis lateralibus principalibus costalibus utrinque ca. 12 vel ultra sub angulo 70-80°, nervis validis in lobis posticis plerumque 3 in costulas breves in sinu per 1.5-2 cm nudas conjunctis. Inflorescentia solitaria. Pedunculus 7 cm longus. Spatha 10.3 cm longa extra pallide viridis, tubo 5.5 cm longo intra ex brunneo rubro limbo albedo. Spadix spatham aequans antice axe ad basim per 0.5 cm nudo, parte pistillata 8 cm longa, parte staminata sterili 0.7 cm longa fertili 4.2 cm longa (in sicco). Flores pistillati ovario 5-7-loculari loculis 2-ovulatis. Flores staminati plerumque 3-2-andri.

TYPUS: Julian A. Steyermark 107164. Climbing; spathe pale green without, whitish within above middle, maroon within below middle, staminate and pistillate spadix white, equaling spathe; leaves papyraceous, deep green above, dull green below. Vecindades de Simarawochi, río Matacuni, 3°49' N., 64°36' O., a unos 6-7 km al oeste de la frontera venezolano-brasilera, Territorio Federal Amazonas, 795-830 m, 18 de abril-23 de mayo, 1973 [Holotypus: VEN].

Pertains to Section Oligospermium Engl. It differs from P. acutatum Schott by the narrower leaf blade having more numerous principal lateral veins as well as poorly developed basal lobes that lack well-defined basal ribs, and by the apparently solitary inflorescence.

Philodendron orionis Bunt., sp. nov. (Fig. 36, 37)

Herba grandis scandens. Caulis usque 10 m longus 6 cm diam. nudus internodiis ca. 1.5 cm longis. Cataphyllum usque 58 cm longum mox caducum. Petiolus usque 1.04 m longus, in medio fere teres 1.9-2.5 cm diam., apicem versus adaxiale convexus vel planus, interdum paulo purpureo-maculatus, parte vaginata 5.7-10 cm longa. Foliorum lamina tenuiter semicoriacea (in sicco chartacea) tamen fragilis parallela ad nervos laterales 1. facile fracta, ovata



36

37

(in stirpe juvenili triangularis), 73-90 cm longa 47-58 cm lata (in loco 6-12 cm supra basim costae), ad apicem acuta vel obtusa apice ipso acuminata (0.8-2 cm), ad basim cordato-sagittata lobis posticis 19-23 cm longis 20-25 cm latis plerumque angularibus apice obtusis sinu ob margines fere contiguos anguste spathulato sejunctis vel lobis imbricatis sinu clauso et obovato, adaxiale obscure viridis plus minusve nitida costa 1.7 cm lata nervis lateralibus I. costalibus sulcatis utrinque 5-6 sub angulo 55-70° prodeuntibus, uterque costula in sinu per 0.7-2 cm nuda nervis principalibus latere inferiore 3 latere exterioriore 3-4. Inflorescentiae binae vel ternae. Pedunculus 3.5-6 cm longus viridis sursum purpurens. Spatha 18-19 cm longa tubo 9-9.5 cm longo 3-4.3 cm crasso extra saltem latere uno obscure vinaceo margine diaphano 0.3 cm lato limbo viridi vinaceo-maculato, intra tubo obscure rubro-pureo limbo albido. Spadix spatha 1.3 cm brevior, 13.3-16 cm longus, postice sessilis antice axe in basi per 0.8-2.7 cm nudo, parte pistillata luteola antice 4.9 cm postice 2.8 cm longa 1.7 cm crassa demum 6.5(4.6) cm longa, parte staminata sterili alba 2.6-3 cm longa 2.2 cm crassa fertili alba 7.8 cm longa 2.2 cm crassa. Flores pistillati ovario 7-9-loculari, ovulis in quoque loculo numerosis superpositis. Flores staminati 6-5(-4)-andri.

TYPUS: George S. Bunting & Miguel Fucci 13470. Epífita trepando hasta 10 m en tronco, el metro apical colgante. Tallo x 6 cm, limpio. Pecíolo hasta 1 m de largo, casi terete en mitad, hacia ápice adax. convexo. Lámina delgadamente semicoriácea, sin embargo frágil, adax. verde oscuro y más o menos lustrosa, nervio medio algo convexo x 1,7 cm en base, I. sulcados, los menores finos y elevados. Inflorescencias 3 juntas, casi en anthesis 21,5 cm de largo; espata 18 cm de largo; tubo 9 x 3,3 cm, afuera vino tinto oscuro y verde en limbo, adentro tubo morado esp. fuerte en mitad inferior y limbo blanquecino; espádice 15 cm de largo, sésil atrás. En bosque nublado; Páramo Agua Linda, en la vecindad de las torres de relé de TV en la cima del cerro directamente al norte de Palmarito (en la carretera Lara-Zulia ca. 35 km al este de El Venado, Edo. Zulia), en km 12-13 de la vía, 10°8' N., 70°43' O., Dto. Torres, Edo. Lara, ca. 1300 m, 14 de marzo, 1985 [Holotypus: NY; isotypi: K, MO, VEN].

PARATYPUS: George S. Bunting & Alexander Stoddart 9727. Hierba inmensa trepando en tronco de árbol ca. 4 m y extendiéndose sobre el piso. Pecíolo subterete, adax. más o menos aplanado, x 2,2 cm en mitad. Lámina bien firme, lustrosa adax., nervio medio plano en la haz, bajo-angular en envés. Inflorescencias un par, 25 cm de largo; espata 19 cm de largo, tubo morado en un lado y 9,5 x 4,3 cm. Ib. ut typus, 6-7 de septiembre, 1980 [K, NY, VEN].

Pertains to Section Polyspermium Engl. The paratype was collected at Fundo Orión, retreat of Dr. N. E. Durango Nazariego, physician and naturalist, of Maracaibo, Edo. Zulia.

Philodendron peraiense Bunt., sp. nov. (Fig. 35)

Herba subscandens. Caulis . . . Petiolus 44-55 cm longus, quam lamina 1.14-1.45plo longior; geniculum ut videtur longum. Fo-

liorum lamina papyracea (in sicco) elliptica vel elliptico-ovata, 36.5-38 cm longa 16.5-22 cm lata, ad basim obtuso-subtruncata, ad apicem obtusa apice ipso acuminata (1 cm), nervatione in ambabus superficiebus prominenti, costa lata nervis lateralibus 1. utrinque 9-10 sub angulo 65-75° oreuntibus. Inflorescentia ignota.

TYPUS: Julian A. Steyermark 111356. Subclimbing. Virgin tall forest; 9 km east of Perai-tepuy, Edo. Bolívar, 900 m, January 3, 1975 [Holotypus: VEN].

PARATYPUS: Julian A. Steyermark 111357. Subclimbing. Virgin tall forest; ib. ut typus, January 3, 1975 [VEN].

Probably pertains to Section Philopsammus Bunt.

Philodendron perplexum Bunt., sp. nov. (Fig. 38)

P. lindenii Schott affine sed differt foliorum lamina ambitu fere triangulari et lobis posticis brevioribus sinu minus profundo sejunctis.

TYPUS: George S. Bunting 4402. Climber to 8 m up tree trunk. Stem x 2.4 cm, internodes 8.5 cm long, surface silvery-gray. Petiole spongy, not strong, subterete, light green with bright green dashes. Leaf blade firm and pliable, undulate, adax. rich green & glaucescent, glossy if rubbed, midrib convex 8 mm wide, not really nude in sinus, abax. pale green & very glossy with rib lime green & strongly convex, I.'s. salient. Cataphyll 23.5 cm long, creamy with green spots. Peduncle stoutish, medium green. Spathe 16 cm long (pre-anthesis); tube 7.5 x 1.9 cm, subfusiform, outside medium green with a few purplish circular spots, limb cream, inside tube cherry in basal half and creamy upward with orangish lines extending onto the creamy limb. En bosque siempre-verde; alrededores de La Fría, en Las Pavas (desvío hacia La Grita), a lo largo del caño Aguas Calientes, Edo. Táchira, 125-200 m, 9 de abril, 1971 [Holotypus: NY; isotypi: K, VEN].

PARATYPUS: George S. Bunting 13386. Hierba trepando 5 m en tronco. Tallo x 2 cm. Pecíolo algo aplanado adax., en ápice x 0,8 cm, encima de la parte vaginada x 1,8 cm, vaginado 10 cm. Lámina foliar más o menos tenue, adax. semilustrosa, algo glaucescente, nervio medio algo convexo, I. sulcados, abax. muy lustrosa. Pedunculo 5,5 cm de largo. Espata 13,3 cm de largo, tubo 6 x 1,5 cm (joven), toda verde excepto tubo adentro rojo cerezo en mitad basal; 1,2 cm más larga que espádice. Espádice sécil, parte pistilada 3,4 cm de largo. En bosque siempreverde; ib. ut typus, 25 de febrero, 1985 [NY, VEN].

Pertains to Section Oligospermium Engl.

Philodendron rhodoaxis Bunt. var. **angustifolium** Bunt., var. nov. (Fig. 39)

Differt a var. rhodoaxe foliis minoribus lamina proportione angustiora pro medio 3.5plo longiora quam latiora (in illa 2.4plo).

TYPUS: Julian A. Steyermark, Victor Carreño & Elisabeth Diederichs 106738. Climbing; spathe green; leaves coriaceous, shining

dark green above. Selva nublada virgen en la fila de la cumbre, El Amparo hacia Candelaria, a 7-10 km al norte de Salóm, Edo. Yaracuy, 1200-1300 m, 27-30 de diciembre, 1972 [Holotypus: VEN].

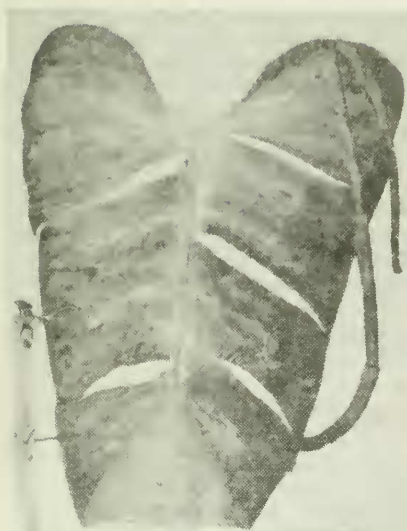
PARATYPUS: Julian A. Steyermark, George S. Bunting & G. Wessels-Boer 100237. Climbing; sheath closed; leaves coriaceous, shiny both sides, dark green above, medium green below. Cerro La Chapa, selva nublada al norte de Nirgua, Edo. Yaracuy, 1200-1400 m, 9-10 de noviembre, 1967 [VEN].

Pertains to Section Pteromischum Schott.

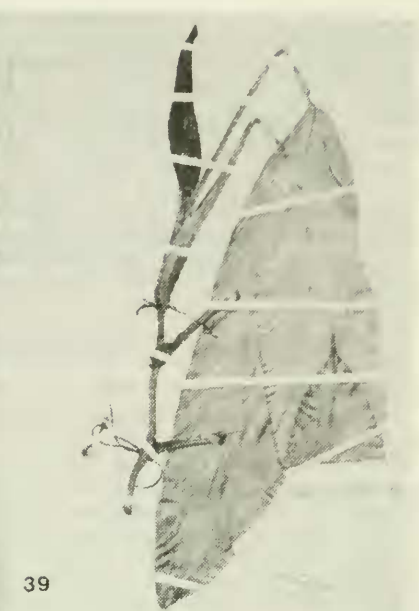
Philodendron sabulosum Bunt., sp. nov. (Fig. 40)

Herba usque 1.5 m alta. Caulis erectus vel interdum basi truncorum arborum breviter adhaerens, usque 40 cm longus 2.7-3 cm crassus internodiis brevibus, ubique cataphyllorum reliquiis persistentibus tectus. Cataphyllum cremicolor interdum vinoso-maculatum vel roseo-vinoso-suffusum, in situ siccans persistens paulatim solutum (haud fibrosum). Petiolus arrectus rigidus, subteres attamen adaxiale canaliculatus canali quam petioli dimidio angustiore marginibus prominentibus, 25-45(-62) cm longus parte vaginata 4.5-10 cm longa; geniculum 1.4-1.7 cm longum. Foliorum lamina petiolum aequans vel eo 1.5 plo longior, dure coriacea rigida ambitu elliptica, 35-56 cm longa (8-)12.5-25.5 cm lata, ad basim late cuneata vel truncata vel leviter emarginata, ad apice obtusa interdum cuspidata (0.4 cm), modice corrugata, adaxiale saturate viridis glaucescens et seminitida, costa pallidiore 1.1-1.6 cm lata nervis lateralibus I. sulcatis utrinque 7-9 sub angulo 50-65° (-70°) prodeuntibus, abaxiale impolita costa valde convexa nervis lateralibus I. non validis. Inflorescentiae solitariae. Pedunculus (sub fructu) 7.5-17 cm. Spatha 11-17 cm longa tubo 4.5-7 cm longo extra olivaceo pallido limbo albo, intra tubo nitido vinoso limbo roseo vinoso-punctato ad apicem cremicolori. Spadix spatham aequans vel ea brevior, stipitatus stipite cremicolori postice 0.3-0.7 cm longo antice 1 cm longo, parte pistillata 2.3-3.5 x 1.5 cm, parte staminata sterili 1-2.5 x 1.3 cm fertili 6 x 1.2 cm. Flores pistillati ovario 2(-3)-loculari, loculis 7-9-ovulatis ovulis superpositis. Flores staminati (5-)4(-3)-andri. Infructescentia ipsa 5.5-6.4 cm x ca. 3 cm. Baccae ambitu oblongae (compresso-cylindricae) 0.6-0.7 cm x 0.3-0.34 cm apice ex viridi cremicolores deorsum cremicolores. Semina 1.25 x 0.64 cm brunnea.

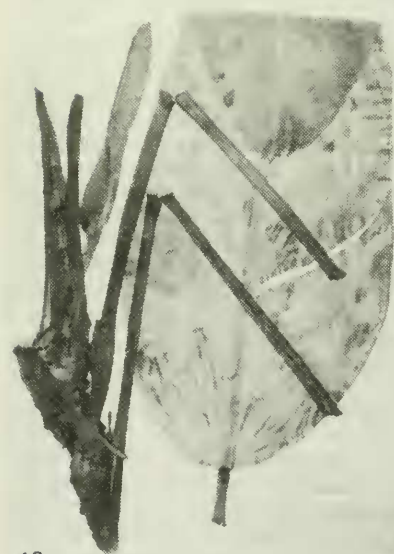
TYPUS: George S. Bunting, L.M.A. Akkermans & J. van Rooden 3848A. Erect herb or stems shortly clinging to tree base, not more than 40 cm long, with persistent cataphyll remains dark brown. Petiole stiff, green, subterete adax. canaliculate. Leaf blade coriaceous, very smooth adax., rich green, glaucescent, semi-glossy, very glossy when young; midrib paler 1.1-1.6 cm wide, downward flat upward sl. convex; adax. lime green, matte, midrib strong convex; new leaves coppery adax. with rosy coppery rib, abax. pale green suffused rosy with midrib very pale green. Ped. pale green. Spathe tube outside pale olive, limb white, inside tube glossy wine-colored with limb rose dotted with wine and



38



39



40



41

creamy near apex. Stipe cream, 1.0(0.7) cm long; spadix slender. Infructescence proper 5.5 x 2.9 cm, fruits greenish cream apically, creamy below, 7 x 3 mm, oblong (compressed-cylindric). En sabana y márgenes del bosque; alrededores de Yavita (río Temi), Depto. Casiquiare, Territorio Federal Amazonas, 125-140 m, 11-13 de julio, 1969 [Holotypus: NY; isotypi: U, VEN].

PARATYPUS: Bassett Maguire, John J. Wurdack & George S. Bunting 36335B. Caulescent herb to 1.3 m high. Lower stem bare in tall plants. Spathe white without; within white above, female portion dark red. Spadix white. Petiole canaliculate. Locally abundant in sabanita, Yavita-Pimichín trail, near Pimichín, Río Guainía, Territorio Federal Amazonas, 140 m, 22 November, 1953 [NY, VEN].

Petains to Section Philopsammos Bunt.

Philodendron strictum Bunt., sp. nov. (Fig. 41)

Herba erecta. Caulis elongatus per 0.6-1.0 m distale erectus parte proximali reclinatus, fortis et fibrosissimus 4.5-8 cm diam. internodiis 2-3.5(-6) cm longis, deorsum nudus parte superiore cataphyllorum reliquiis persistentibus. Cataphyllum usque 52 cm longus in situ siccans paulatim fractans et solutum. Petioli arrecti perrigidi, in medio subteretes adaxiale modice plani, sursum semiteretes, usque 0.96-1.25 m longi 1.9 cm crassi (in medio), quam laminae 1.5-1.7plo longiores, parte vaginata ca. 6 cm longa, per 15-20 cm superiora subgeniculati, in sicco epidermide plus minusve fulvo-pellucida et soluta. Foliorum lamina in petiolo reflexa chartacea secus nervos laterales facile fracta, ambitu late ovata 51-79 cm longa 37-65 cm lata, ad apicem obtusa apice ipso acuminata (1.5-3 cm), ad basim cordata lobis posticis late rotundatis sinu anguste spatulato 14-24 cm longo sejunctis vel lobis imbricatis sinu clauso et obovato, adaxiale nitida vel glaucescens costa plana ad 1.3 cm lata nervis lateralibus 1. costalibus sulcatis utrinque 7-9 sub angulo 50-55°, nervis validis in uterque lobo postico 6-7 in costulam 4(-6) cm longam in sinu per 2-4.5 cm nudam conjunctis, abaxiale impolita glauca costa et nervatione principali convexa luteo-viridi, nervis minoribus in ambabus superficiebus porominentibus. Inflorescentiae una multae. Pedunculus 9 cm longus. Spatha anguste cylindrica usque 16 cm longa tubo 6.5 cm longo, extra tubo(?) sordide roseo-rubro limbo(?) pallide viridi. Spadix spatha ca. 1 cm brevior, sessilis, parte pistillata 2 cm longa, parte staminata sterili ca. 2 cm longa fertili 9 cm longa. Flores pistillati ovario ut videtur 7-8-loculari, ovulis in quoque loculo numerosis superpositis. Flores staminati 4-3-andri.

TYPUS: George S. Bunting & Gustavo Borges M. 5001. Huge herb on ground with terminal meter of stem more or less erect. Stem 7-8 cm diam. Cataphyll greenish cream dashed pink, drying in place to thin fibrous mass, its paper-thin epidermal layer sloughing off or adherent to stem for a period. Petioles firm, ascending (nearly vertical), at midpt. 1.6 cm thick, subterete but adaxially low angular-convex, upper 20 cm geniculate! Blade at 90° or more to

petiole, thin, firm but fragile (tears along nerves easily), rich green adax. & glaucescent, glossy if rubbed; rib flat 1.3 cm wide, upward lightly channeled, basal ribs sulcate & nude 2.5-4.5 cm; abax. lime green, matte, rib yellow-green low angular-convex. Inflorescences just forming, very young. En bosque siempreverde original; carretera San Cristóbal-Chorro del Indio-Caño Seco-La Florida, entre km 20-22 (al este de San Cristóbal), Edo. Táchira, 1100-1125 m, 6 de marzo, 1977 [Holotypus: NY; isotypus: VEN].

PARATYPUS: Julian A. Steyermark & Ronald Liesner 119063. Terrestrial; erect stems up to 3 m high; leaves glaucous or gray-silvery green below, rich green above, very large; spathe dull rose-red and pale green without, narrowly cylindrical, several clustered at base of stem. Primary forest over sandstone substrate, Cerro Las Minas, bordering Quebrada Las Minas, 19-20 km SE of Santa Ana, 7°36' N., 72°13' W., Edo. Táchira, 1150-1250 m, 29 July 1979 [VEN].

Pertains to Section *Polyspermium* Engl.

***Philodendron sucrose* Bunt., sp. nov.** (Fig. 42)

Herba grandis. Caulis dependens 1 m vel ultra longus 8 cm diam. internodiis brevissimis, strato crasso reliquiarum cataphyllorum vestitus. Cataphyllum latum 32 cm longum deorsum usque ad 2.5 cm crassum. Petiolus robustissimus gravisque leviter spongiosus, subteres attamen adaxiale perspicue planus, 69-95 cm longus 2.7 cm latus (2.3 cm crassus) supra medium violaceo-notatus, parte vaginata ca. 5 cm longa. Foliorum lamina in petiolo arrecta, coriacea etsi secus nervos laterales facile fracta, ambitu late ovata usque ad 75 cm longa 63 cm lata, ad basim subsagittato-cordata, ad apicem late obtusa (170-180°) et abrupte acuminata, valde undulata, lobis posticis subangularibus apice ipso obtusissimis sinu aperto 10-15 cm profundo sejunctis, adaxiale vix nitida leviter glaucescens costa basi ca. 1.3 cm lata, nervis lateralibus I. costalibus utrinque ca. 7-8 late sulcatis sub angulo 45-55° oreuntibus, costa et nervis rubro-purpureo-punctatis, I. basalibus 3-5 in costulas breves in sinu 4-6.5 cm nudas conjunctis, abaxiale lamina viridis pallidissima, costa valde angulari-convexa purpureo-maculata, lateralibus I. validissimis convexis ex viridi cremicoloribus. Inflorescentia ignota.

TYPUS: George S. Bunting 2703. Huge epiphyte just below crown of large, moriche-like palm. Stem 1 m or more long, pendent from lower fronds of palm, 8 cm thick (x.s.) but appearing larger by persistence of old cataphylls that deteriorate in place, completely clothing stem and making it look huge (perhaps 10 cm diam.). Cataphyll pale greenish white with bright green dashes overall, early becoming dark rust-cacao color, somewhat red-spotted, decidedly wide, 2-ridged abax., tissue 1.7-2.5 cm thick! Cut tissue with pungent, agreeable odor. Petiole heavy, slightly spongy, rounded below & very flat adax. with decided angles at margins of flat face, with many elongate violet spots esp. in upper $\frac{1}{2}$ or $\frac{1}{3}$ and bright green striolate-dashed. Blade suberect on petiole, decidedly coriaceous, quite pliable though tears easily along

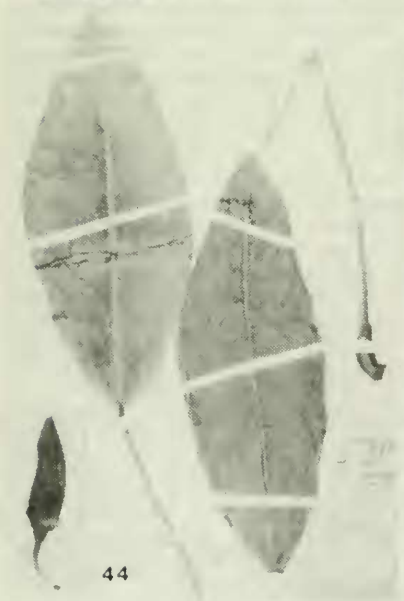
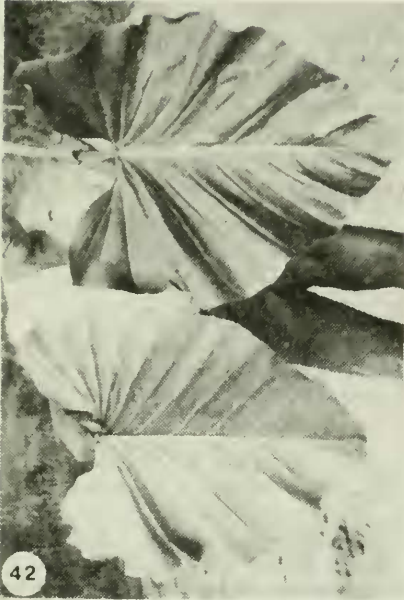
veins; midrib adax. slightly concave, 1.3 cm wide near base, with fine red-purple dots over all the ribs & veins; basal ribs ascending from plane of anterior lobe; blade scarcely glossy adax. sl. glaucescent, abax. not glossy, very pale green with even paler midrib & I.'s. Not flowering. En bosque al lado del caño, carretera Caripito-Carúpano, 42 km al noroeste de Caripito, entre Río Grande y Juan Antonio, Edo. Sucre, ca. 225 m, 1 de diciembre, 1967 [Holotypus: NY; isotypi: K, VEN].

Philodendron tachirensis Bunt., sp. nov. (Fig. 43)

Herba scandens. Caulis usque ad 4 m longus 2.4 cm diam. internodiis (2-)3-5 cm longis, nudus. Cataphyllum 16-17.5 cm longum, caducum. Petiolus crassus (in stirpe juvenile valde tumidus) subteres attamen prope apicem adaxiale planiusculus, 22-31 cm longus 1.7 cm latus (in medio) parte vaginata 2.2-5.8 cm longa. Foliolorum lamina plana subcoriacea (vel in sicco crassiuscule papyracea) inaequilatera late ovata 30-35 cm longa 22-29 cm lata, ad basim oblique cordata vel subcordata lobis posticis rotundatis brevis sinu triangulari 2-5 cm longo sejunctis, ad apicem late obtusa (125-130°) apice ipso abrupte acuminata (0.4-1 cm), adaxiale saturate viridis glaucescens vel nitescens costa prope basim fere plana et 1.4 cm lata sursum convexa nervis lateralibus I. sulcatis utrinque 7 sub angulo 70-75° abeuntibus, abaxiale costa lata convexa nervis lateralibus I. convexis. Inflorescentiae quaternae vel quinae. Pedunculus 6-10 cm longus. Spatha sine constrictione ubique ejusdem diametri 7-7.5 cm longa 0.7-0.8 cm diam., dimidio inferiore extra viridis intra cerasina, dimidio superiore in ambabus paginis alba, demum usque ad 9.2 cm longa deorsum 1.1 cm sursum 0.9 cm diam. Spadix spatha paulo brevior, stipitatus stipite postice 0.1-0.3 cm antice 0.3-0.6 cm longo, parte pistillata 2.1-3 x 0.65 cm, parte staminata sterili 0.5-0.6 x 0.45 cm fertili 3.3 x 0.55 cm. Flores pistillati ovario 5-loculari loculis uniovulatis. Flores staminatae constanter 3-andri.

TYPUS: George S. Bunting, Luis E. Chacón & Gustavo Borges M. 8587. Trepando 3 m en tronco de un árbol. Tallo limpio, 2.0-2.4 cm diám. (en un mismo tallo). Pecíolo terete, cerca del ápice poco aplanada adax., 1.7 cm diám. (en mitad). Lámina carnosa, bien dura, en haz verde intensa, lustrosa si frotada; nervio medio poco convexo hacia arriba, en base casi plano 1.3 cm de ancho; nervios I. sulcados. Espata sin constricción, 7-8 mm diám., tubo fuera verde, adentro color cereza, limbo blanco en ambas caras. En bosque montañoso húmedo original; carretera San Cristóbal-Chorro del Indio-Caño Seco-La Florida, entre km 19-23 al este de San Cristóbal, o sea 8-12 km al este del Chorro del Indio, Dto. San Cristóbal, Edo. Táchira, 1100-1150 m, 23 de diciembre, 1979 [Holotypus: NY; isotypi: MO, VEN].

PARATYPUS: George S. Bunting & Gustavo Borges M. 13031. Climbing up tree trunk ca. 3 m. Petiole more or less tumid even in adult spec., extremely so in juv. shoots, more or less terete. Blade not reflexed though at angle to pet. Lamina subcoriaceous, midrib stout and convex, I. laterals sulcate. Inflorescences 1-3



together, very small, same diameter throughout, tube green outside, limb creamy on both sides, tube inside cherry red. En bosque húmedo montano siempreverde; carretera San Cristóbal-Chorro del Indio-Caño Seco-La Florida, en km 25 al este de San Cristóbal, Edo. Táchira, ca. 1100 m, 7 de junio, 1973 [MO, NY, VEN].

Pertains to Section Oligospermium Engl.

Philodendron tatei Krause subsp. *melanochlorum* (Bunt.) Bunt., comb. nov. (Fig. 44)

P. melanochlorum Bunt., Acta Bot. Venezuelica 10(1-4): 304. 1975.

TYPUS: George S. Bunting 2858 [Holotypus: MY]. PARATYPUS: Julian A. Steyermark s.n. (Núm. Herb. 86718) [VEN].

Pertains to Section Philopsammos Bunt. The close affinity of *P. melanochlorum* and *P. tatei* is demonstrated by recent collections of these taxa. It now seems appropriate to treat them as parts of a single species.

Philodendron triangulare Bunt., sp. nov. (Fig. 45)

Herba scandens. Caulis usque ad 4 m longus irregulariter 4-gonus latere angustissimo sulcatus internodiis 10 cm longis 1.7 cm diam. Cataphyllum 29.5 cm longum mox caducum. Petiolus succosus fragilis subteres attamen adaxiale planus, 35-45 cm longus 1.3 cm latus (in medio) parte vaginata 7-10 cm longa. Foliorum lamina in petiolo arrecta, plus minusve coriacea tamen fragilis (in sicco semicoriacea) ambitu triangularis marginibus lateralibus plus minusve rectis, 34-43 cm longa 17-23 cm lata (in loco 4-6 cm supra insertionem petioli), ad basim plus minusve subcordata sinu aperto 1.5-3.5 cm profundo, apice anguste acuminata (2-3 cm), in ambabus paginis nitida, adaxiale saturate viridis costa convexa 0.6 cm lata nervis lateralibus tenuibus sulcatis utrinque 6-7 sub angulo 55-65° (-70°) oreuntibus, abaxiale nervis omnibus prominentibus. Inflorescentiae senae. Pedunculus usque ad 10 cm longus (per anthesin). Spatha 8.5-14.5 cm longa (cuspidate 0.3 cm longo incluso) tubo vix discreto extra laete viridi limbo pallidiore, intra ubique ex cremo viridis. Spadix stipitatus stipite 0.5-0.7 cm longo, parte pistillata 4-4.3 cm longa, parte staminata 7.8 cm longa. Flores pistillati ovario 5-7-loculari loculis uniovulatis. Flores staminati (5-)4-2-andri.

TYPUS: George S. Bunting 4372. Climber 4 m on tree trunk. Stem irregularly 4-angular & furrowed on one side, x 1.7 cm. Petiole succulent, brittle, subterete with adax. face flattened. Blade not reflexed, more or less coriaceous but very brittle, margins strongly undulate, glossy on both surfaces. Inflorescences 6 together. Spathe tube glossy bright green outside, limb paler, inside creamy green overall. Cataphyll caducous, 29.5 cm long. En selva nublada al lado de una quebrada; carretera Escuque-La Mesa de San Pedro, aprox. 5 km arriba de Escuque, Edo. Trujillo, 1300-1650 m, 6 de abril, 1971 [Holotypus: NY; isotypi: K, VEN].

Pertains to Section Oligospermium Engl.

Philodendron victoriae Bunt., sp. nov. (Fig. 46)

P. barrosoano Bunt. maxime affine sed plerumque planta major, foliorum lamina lobo antico proportione angustiore sed deorsum minus contracto marginibus magis sinuato-repandis, lobis laterali-bus apicem versus obtusioribus apice ipso non attenuatis autem obtuso-rotundatis sinu proportione profundiore sejunctis, spatha quam spadice saepe brevior et sine acumine apicali.

TYPUS: George S. Bunting 13377. Hierba trepando en tronco de árbol. Lámina foliar adax. lustrosa si frotada, en envés lustrosa, márgenes moradas. Pecíolo con pocas manchitas moradas en parte superior, subterete, algo aplanado adax., x 2 cm de ancho, 1,8 cm de grueso (en mitad). Espata tan larga como espádice, 16,2 cm de largo, tubo 9 x 5,7 cm; afuera tubo verdoso, limbo blanco, toda marcada con manchas rojas; tubo adentro rojo-cerezo. En bosque siempreverde; alrededores de La Fría, en Las Pavas (desvío hacia La Grita), a lo largo del caño Aguas Calientes, Edo. Táchira, 125-200 m, 25 de febrero, 1985 [Holotypus: NY; isotypus: VEN].

PARATYPI: George S. Bunting 2269. High-climbing on tree trunk. Stem to 3.5 cm thick. Cataphyll 32 cm long, spongy. Blade subcoriaceous. Petiole to 83 cm long, effectively terete, x 1.6 cm, vaginate to 3.5 cm, succose & tissue sort of gelatinous. Peduncles 5 together, 6 cm long in anthesis. Spathe 14.5 cm long; tube 7.5 cm long, outside greenish flushed rose with many dark purple dots on back, limb outside cream-yellow flushed rose & boat-shaped, inside tube cherry-rose in base fading upward to constriction, above creamy white on limb. Spadix 14 cm long, 1-2 mm longer than spathe, sessile but nude 7 mm in front. Common; seen at somewhat lower elevations but none at higher ones; Barinitas, en bosque inmediatamente al lado del límite suroeste del pueblo, Edo. Barinas, ca. 500 m, 21 de agosto, 1967 [K, NY, VEN].

George S. Bunting 2371. Large climber. Stem 4.2 cm thick. Leaf blade glossy adax., scarcely reflexed on petiole, the 3 lobes in same plane; basal ribs forming 180°. Petiole terete, purplish at apex. Inflorescences 3 together. Peduncle 5 cm long, greenish. Spathe 15.3 cm long, 4 mm shorter than spadix; tube 8.4 cm long, outside greenish with round wine-colored dots, inside cherry-colored up to constriction; limb cream-colored outside, creamy white & glossy inside; in age, spathe to 20 cm long, tube 10.5 cm long, green overall outside. Agua Dulce, sitio 9 km al este de la alcabala de El Corozo, carretera San Cristóbal-Santo Domingo del Táchira, Edo. Táchira, 1 de octubre, 1967 [NY, VEN].

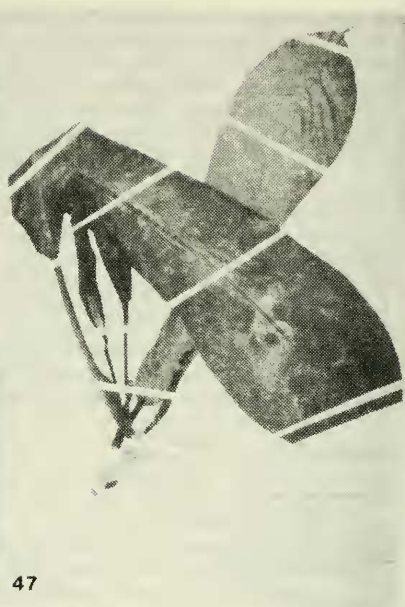
Pertains to Section Oligospermium Engl. Very related to P. barrosoanum Bunt. of Amazonia, P. victoriae is isolated north of the Llanos at the base of the Cordilleras of Mérida and Perijá. The epithet refers to the fancied resemblance of the leaf blade of this taxon to the "Winged Victory" or "Victory of Samothrace".

Philodendron wurdackii Bunt., sp. nov. (Fig. 47)

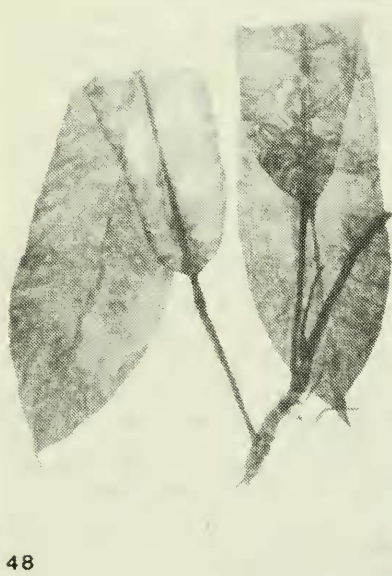
Herba scandens. Caulis usque ad 4 m longus 1.1 cm diam. laevis nudus internodiis 2-7 cm longis. Cataphyllum mox caducum. Pe-



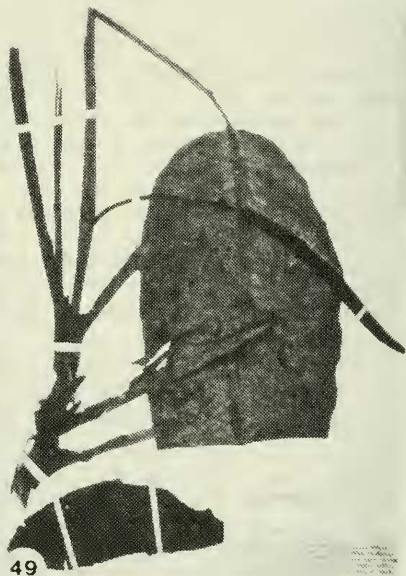
46



47



48



49

...
...
...
...

tiolus spongiosus 8-14 cm longus adaxiale abaxialeque convexus, dimidio superiore lateraliter alato-angulosus et latior quam crassior (1.1-1.3 cm latus 0.6-0.9 cm crassus), parte vaginata 2-5.7 cm longa (in stirpe juvenili usque ad apicem vaginatus). Foliorum lamina in petiolo arrecta, coriacea anguste obovato-spathulata interdum basim versus contracta, 34-48 cm longa 7-12 cm lata, ad basim truncata vel emarginata, ad apicem obtusa vel acuta apice ipso acuminata (1-3 cm), adaxiale nitida laete viridis costa convexa prope basim 0.7 cm lata nervis lateralibus tenuibus subaequalibus sub angulo 50-60° exeuntibus, abaxiale pallide viridis glaucescens nitescens costa valde convexa aliquot nervis lateralibus a ceteris aegre distinguibilibus. Inflorescentiae solitariae ad ternae. Pedunculus 4-9.5 cm longus. Spatha 9-13 cm longa tubo 4.5-4.8 x 2 cm extra pallide viridi limbo cremicolori, intra ubique cremeo-alba. Spadix supra apicem spathae 0.5-1.2 cm exsertus, stipitatus stipite 0.2-1.3 cm longo, parte pistillata 2.3-3.5 x 0.8 cm, parte staminata 5.7-6.9 cm longa. Flores pistillati ovario 6-loculari loculis uniovulatis. Flores staminati 3-2-andri.

TYPUS: Bassett Maguire, John J. Wurdack & George S. Bunting 37446. Epiphyte in full sun; climbing to 2 m high. Spathe greenish. Occasional; upper Río Yaciba, between Cerro de la Neblina base camp and white-water affluents, Ríos Pacimoni-Yatúa, Depto. Río Negro, Territorio Federal Amazonas, 120-150 m, January 30-31, 1954 [Holotypus: NY].

PARATYPUS: Julian A. Steyermark & George S. Bunting 102595. Slender climber, to 4 m. Stem x 1.1 cm. Petiole spongy, convex adax., ca. 1 mm alate-angled on each side, more or less inflated. Blade coriaceous, flat, adax. glossy bright green, no veins salient; abax. pale green glaucescent, all veins fine & subequal (a few slightly stronger). Infls. 1-3 together. Spathe 13 cm long; tube pale green & x 2 cm, limb cream & glossy; inside creamy white. Spadix slightly exceeding spathe, 10.4 cm long, ca. 1.2 cm exposed. A lo largo del río Yatúa, margen izquierda, bajando desde el Cerro Araucaua, 1°35' N., 66°10' O., Depto. Río Negro, Territorio Federal Amazonas, 125 m, 14 de marzo, 1970 [VEN].

Pertains to Section Oligospermium Engl. Philodendron wurdackii is distinguished from P. uleanum Engl. and other similar species by the imperceptibility of primary lateral veins in the leaf blade. All veins are subequal in the dry specimen, although when alive, it is possible to discern primary laterals as slight depressions on the adaxial face. Furthermore, the inflorescences are proportionally very large. For these same reasons, P. wurdackii is also separated from P. angustialatum Engl., which has an alate petiole of similar form.

Philodendron yavitense Bunt., sp. nov. (Fig. 48)

Herba scandens. Caulis ad 1.4 cm diam. nudus internodiis 0.7-0.9 cm longis (in parte inferiore ad 10.5 cm longis). Cataphyllum 12.7 cm longum ex viridi album margines versus hyalinum caducum. Petiolus rigidus abaxiale rotundatus adaxiale late canaliculatus dilute viridis 11-12 cm longus. Foliorum lamina in pe-

tiolo arrecta, coriacea attamen plus minusve fragilis anguste obovato-spathulata undulata 38-40 cm longa 9.3-9.7 cm lata (in loco 25-27 cm supra insertionem petioli), ad basim obtusa, ad apicem acuta vel fere obtusa apice ipso acuminata (2-3 cm), adaxiale saturate viridis glaucescens costa prope basim paulo concava 0.9 cm lata sursum plana vel paulo convexa nervis lateralibus 1. utrinque 7-8 sub angulo 65-70° prodeuntibus, totis nervis minoribus subaequalibus in ambabus paginis manifestis. Inflorescentia ignota.

TYPUS: George S. Bunting, L.M.A. Akkermans & J. van Rooden 3869. Climber, still juvenile apparently. Stem to 1.4 cm diam., internodes 7-9 mm long, light brown, clean. Cataphyll greenish-white, transparent toward margins. Petiole wide concave-channeled adax., stiff, light green, not geniculate. Blade erect on petiole, rich green glaucescent, 1.'s 7/side, sulcate, margins sl. irreg. undulate, midrib sl. concave downward, flat to sl. convex above, x 9 mm below. Blade coriaceous, more or less brittle, very smooth. Alrededores de Yavita (río Temi) y cerca de la carretera Yavita-Pimichín hasta el km 5 hacia Pimichín, Depto. Casiquiare, Territorio Federal Amazonas, 124-140 m, 6-19 de julio, 1969 [Holotypus: NY; isotypi: U, VEN].

Whether the type specimen is adult remains to be determined, although the internodes are already abbreviated and the leaves much larger than those of another specimen collected in the same locality. Fertile material is necessary to resolve this question.

RHODOSPATA

Rhodospata falconensis Bunt., sp. nov. (Fig. 49)

Herba scandens. Caulis usque ad 6 m longus 4 cm diam. internodiis 2.5 cm longis sed in parte florifera brevioribus. Cataphyllum gracile 22 cm longum. Petiolus laminam subaequans, e basi ad basim geniculi vaginatus alis diu persistentibus demum in fibris solutis; geniculum ca. 2.5 cm longum adaxiale canaliculatum. Foliorum lamina papyracea ovata 40-61 cm longa 15-24 cm lata, ad basim rotundato-subtruncata ex loco latissimo usque ad apicem contracta, adaxiale saturate viridis nitida, abaxiale ex luteolo pallide viridis, nervis lateralibus 1. numerosis ca. (1-)1.5-2.5 cm inter se distantibus sub angulo ca. 60° abeuntibus. Pedunculus 18.5 cm longus arcuato-nutans. Spatha (caudicula 2.2 cm longa inclusa) ca. 21 cm longa mox caduca. Spadix stipitatus stipite 1.2-1.5 cm longo, 15.5 cm longus 1.1 cm diam. (in sicco) ex aurantiaco roseus stigmatibus nigris glutinosis.

TYPUS: Robert Wingfield 8221A. Trepador herbáceo hasta 6 m, tallo hasta 4 cm (¿o más?) diam. Hojas con lámina hasta 61 x 24 cm. Pedúnculo curvado en más o menos 90°. Espádice más o menos horizontal, rosado algo anaranjado con estigmas negruzcos y glutinosos. Espata caída, muerta, marrón. Hojas con haz oscura y lustrosa, el envés más pálido y algo amarillento. Selva siempreverde más o menos natural; Sierra de San Luis, arriba de Uria, Edo. Falcón, 1360 m, 11 de abril, 1980 [Holotypus: IUTC].

Rhodospatha falconensis differs from *R. badilloi* Bunt. by having adult leaves with a shorter geniculum and a proportionally narrower blade of more delicate texture (in that, 1.8-2.1:1 and coriaceous), and from *R. moritziana* (Schott) Croat by its climbing habit and proportionally narrower leaf blades.

***Rhodospatha guasarensis* Bunt., sp. nov. (Fig. 50, 51)**

Herba scandens. Caulis usque ad 4 m longus 1.5 cm diam. internodiis 2-3 cm longis. Cataphyllum 23 cm longum. Petiolus 32-49 cm longus, e basi ad locum 5.7-0.5 cm infra basim geniculi vaginatus; geniculum 1.8-3.8 cm longum. Foliorum lamina papyracea elliptica vel elliptico-ovata vel -obovata 37-48 cm longa 15-22 cm lata, uterque extremitatem versus attenuata apice acuminata (1.5-3 cm) basi angustata, abaxiale nitida, adaxiale impolita numerosis nervis lateralibus I. sulcatis 0.7-1.5 cm inter se distantibus sub angulo 50-65° abeuntibus. Pedunculus erectus, longitudine 1/2 vel 2/3 petioli partes aequans 18-27 cm longus. Spatha spadice 6.5 cm vel ultra longior, 19-25 cm longa 8 cm diam. (applanata 18 cm lata) naviculariformis eburnea. Spadix stipitatus stipite 0.5-0.9 cm longo, 15 cm longus 1.4 cm diam. pallide armeniacus.

TYPUS: George S. Bunting, R.L. Liesner, A.J. Rosario T. & R. León 12256. Hierba trepando un árbol hasta 4 m pero suelta en parte terminal y floreciendo. Hoja mate en haz, lustrosa en envés, verde mediana. Inflorescencia solitaria; espata marfil y naviculi-forme, 25 x 8 cm (18 cm de ancho aplanada); espádice amarillo-anaranjado claro, 14.5 x 1.4 cm. En bosque nublado húmedo; alrededores del Puesto "El Bosque" de la Guardia Nacional, al oeste del río Guasare cerca de la frontera colombo-venezolana, 10°47'35" N., 72°40' O., Dtto. Mara, Edo. Zulia, 1450-1600 m, 14 de noviembre, 1982 [Holotypus: NY; isotypi: MO, VEN, VZM].

This species is distinguished by its small size and its leaf blades basally cuneate-angustate and marginally undulate.

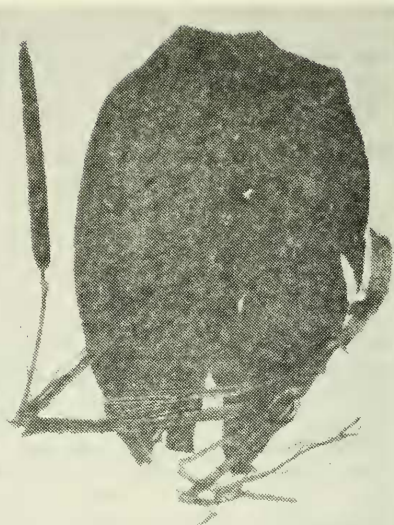
***Rhodospatha steyermarkii* Bunt., sp. nov. (Fig. 52)**

Herba scandens. Caulis ca. 1.3 cm diam. internodiis 2-3 cm longis. Petiolus 42-60 cm longus, e basi ad locum 6-3 cm infra basim geniculi vaginatus, alis siccantibus et longistrorsum dilacerantibus paulatim solutis; geniculum 4-5 cm longum. Foliorum lamina chartacea plus minusve elliptica vel elliptico-ovata 45-67 cm longa 21-27 cm lata (in loco paulo infra medium), in uterque extremitate obtusa basi ipsa angustata (2 cm) apice ipso acuminata (ca. 1 cm), inaequilatera latere altero quam alterum 0.7-3 cm latiore, adaxiale intense viridis nervis lateralibus I. sulcatis utrinque ca. 22 vel ultra 0.9-1.6 cm inter se distantibus sub angulo ca. 70-75° oreuntibus. Pedunculus 28-40 cm longus. Spatha ignota. Spadix stipitatus stipite 2.3-2.7 cm longo, 18-25 cm longus 1.5-2.2 cm crassus basi non obliquus.

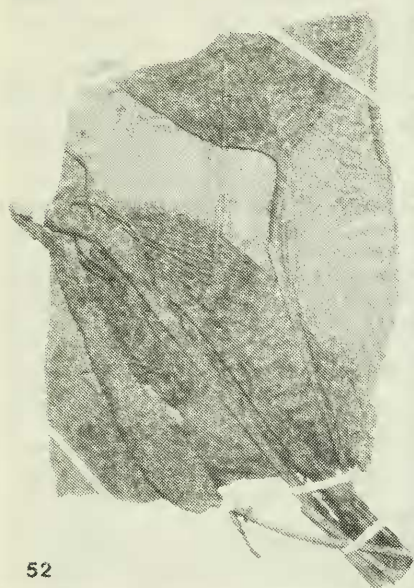
TYPUS: Julian A. Steyermark & Marvin Rabe 96161. Climbing up tree; leaves chartaceous, deep green above, dull green below, sulcate conspicuously above, ribbed conspicuously below. Spadix erect, brownish, 2.5 cm diam. Laderas de selva siempreverde a lo



50



51



52



53

largo de la Quebrada Nivardo, afluente del río Caverna, afluente del río Oscuro, arriba de Mundo Nuevo, al oeste del Cerro de Humo, Península de Paria, Edo. Sucre, 700-750 m, 7 de agosto, 1966 [Holotypus: VEN; isotypus: NY].

From Rhodospatha moritziana (Schott) Croat, this taxon differs by its climbing habit, considerably shorter petioles not even as long as the leaf blades (in that, to 1 m long and 1.2-1.7 times longer than leaf blades), and peduncles 2/3 or more of the length of the petiole (in that, only 1/3-1/2 as long as petiole).

STENOSPERMATION

Stenospermation ammiticum Bunt. subsp. **neblinae** Bunt., subsp. nov.

Herba ut videtur terrestre. Caulis elongatus per 70 cm distalia erectus, 1.3 cm diam. (in sicco) internodiis sursum 1.5 cm deorsum 2.5 cm longis. Petiolus usque ad basim geniculi vaginatus, 12.5-13.5 cm longus, is autem foliorum inflorescentias subtendentium 16-20 cm longus; geniculum 0.8 cm longum adaxiale sulcatum. Foliorum lamina elliptico-obovata uterque extremitate obtusa apice ipso acuminata (1 cm), quam petiolus ca. 1.5plo longior ca. 20 cm longa 8.5 cm lata, ea autem foliorum inflorescentias subtendentium tantum 0.6-0.8 petioli partes aequans ca. 13 cm longa 6 cm lata, adaxiale costa sulcata nervis lateralibus distinguibilibus (in sicco) 0.6-0.8 cm inter se distantibus sub angulo 45-50° prodeuntibus. Pedunculus solitarius erectus 25-31 cm longus, per 2.8 cm distalia geniculatus. Inflorescentia declinata. Spatha apice longe attenuata, 8.7 cm longa viridis caduca. Spadix spatha 3 cm brevior, 5 cm longa 0.9 cm diam. viridis stipite 1 cm longo.

TYPUS: Bassett Maguire, John J. Wurdack & George S. Bunting 37281. Vining, tip erect to 0.7 m. Spathe and spadix green, spathe becoming brown and abscising. Midrib impressed. Geniculum somewhat channeled. Frequent; Cerro de la Neblina, upper slopes below northwest escarpment between Camp 4 and Cumbre Camp, summit, Territorio Federal Amazonas, 1700-2000 m, December 1953-January 1954 [Holotypus: VEN].

This subspecies differs from the typical one by its proportionally longer petioles (in respect to blade length), proportionally wider leaf blades, and nodding inflorescences.

XANTHOSOMA

Xanthosoma bolivaranum Bunt., sp. nov. (Fig. 54)

Herba grandis. Caulis erectus usque ad 30 cm longus. Petiolus viridis 1.17 m longus prope medium 2 cm latus 1.6 cm crassus, adaxiale canaliculatus canale 1 cm lato 0.2 cm profundo marginibus prominentibus sed non angulosis, sursum semiteres apicem versus adaxiale vix angulari-convexus 1.4 cm crassus, parte vaginata 54 cm longa. Foliorum lamina viridis ambitu plus minusve triangulari-ovata (in stirpe juvenili triangularis) ad 73 cm longa ca. 45 cm lata (insertione petioli opposita et trans lobos posticos), ad

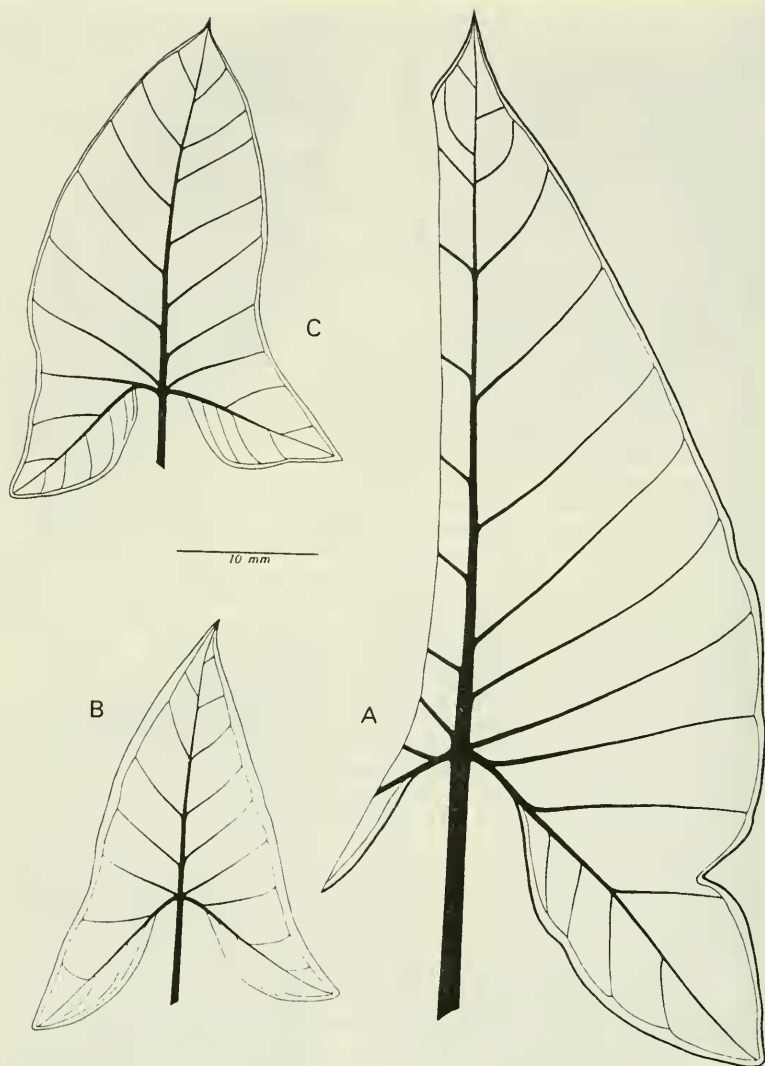


Fig. 54 A, B, Xanthosoma bolivaranum Bunt. A, adult leaf; B, juvenile leaf (both based on Bunting 3095). C, X. maroae Bunt., adult leaf (based on Steyermark & Bunting 102845).

apicem acuminata, ad basim plus minusve sagittata lobis posticis apicem versus attenuatis et valde acuto-angularibus apice ipso obtusis sinu 22.5 cm longo sejunctis, nervis lateralibus I. costalibus utrinque 7 sub angulo ca. 50-55° exeuntibus in nervum collectivum a margine 0.3-0.6 cm remotum conjunctis, costulis ca. 31 cm longis in sinu per 3-4 cm nudis nervis basalibus principalibus latere exteriori 3 latere interiore 4-5. Inflorescentia ignota.

TYPUS: George S. Bunting 3095. Erect herb in edge of forest. Trunks erect, to 30 cm long. Leaf blade dark green, leathery-rubbery. Not flowering. In dark, wet place in forest beside standing water, en selva alta y siempreverde; carretera El Dorado-La Gran Sabana, alrededores de km 87 de la vía, Edo. Bolívar, 200-400 m, 22 de febrero, 1968 [Holotypus: VEN].

Xanthosoma maroae Bunt., sp. nov. (Fig. 53, 54)

Herba acaulis. Caudex numerosa rhizomata tenuia rubra usque ad 34 cm longa 1 cm vel ultra diam. cataphyllis siccis producens colonia mox faciens. Petiolus ex purpureo-lavendulo viridis 47-77 cm longus parte vaginata 25-37 cm longa. Foliorum lamina 0.4-0.7 petioli partes aequans, membranacea (in sicco), adaxiale obscure viridis abaxiale ex purpureo pallide viridis, plerumque sagittata ambitu plus minusve triangularis attamen marginibus lateralibus supra medium convexis deorsum concavis, 29-43 cm longa ad 26 cm lata vulgo latissima trans apicem loborum posticorum unde apicem versus gradatim angustata apice ipso acuminata; lobi postici subrhombici plerumque divaricati secus costula 12-13.5 cm longi 7 cm lati, ad apicem angulosi apice ipso acuti vel obtusi sinu angulari-subrhombico (in vivo, sed in sicco subparabolico) 6-13 cm longo sejuncti, costulis in sinu per 1.5 cm nudis; nervi laterales I. costales utrinque 5-6 sub angulo 50-60° abeuntes in nervum collectivum a margine 0.2-0.45 cm remotum conjuncti, nervis validis basalibus latere exteriori 2-3 latere interiore 4-5. Pedunculus solitarius valde compressus 20-31 cm longus olivaceus pallidus sursum vinaceo-suffusus et -nervatus, cataphyllo angusto vinaceo nigricanti ad 35 cm longo subtentus. Spatha 16-19 cm longa extra impolita intra seminitida tubo 4.5-6 cm longo 2.6-2.9 cm diam. extra olivaceo nervis vinaceis et violaceo-marginato intra pallide viridi nervis vinaceis, limbo in ambabus paginis pallide olivaceo vel eburneo vinaceo-suffuso. Spadix spatha ad 5 cm brevior usque ad 13 cm longus, axe antice nudo ex violaceo eburneo, parte pistillata luteola 1.6(1.0) cm longa, parte staminata sterili violaceo-rubra 4.3 cm longa fertili rosea 6.8 cm longa.

TYPUS: Julian A. Steyermark & George S. Bunting 102845. Leaves suffused below with some purplish, petiole suffused with dull lavender; sterile. Sabana de arena blanca y bosque enano; 1 km al este de Maroa, 2°45' N., 67°35' O., río Guainía, Depto. Casiquiare, Territorio Federal Amazonas, 125 m, 20 de abril, 1970 [Holotypus: VEN].

PARATYPUS: George S. Bunting 4807. Cultivated in garden of George S. Bunting, Urb. Nueva Guayana, San Cristóbal, Edo. Táchira, from propagule of Steyermark & Bunting 102845 collected

near Maroa, Terr. Fed. Amazonas, specimen prepared 16 March 1975. Acaulescent herb producing numerous, slender, red rhizomes that soon give rise to colony of small plants around mother plant. Petiole suffused dull lavender. Blade abaxially suffused purplish. Floral cataphyll black-wine. Peduncle pale olive green upward suffused wine-colored. Spathe outside matte, tube olive green with wine veins and violet-edged, limb similar or dirty white, inside similar though tube semiglossy and limb matte ivory. Spadix with female part pale yellow, sterile male part red-violet and the fertile old rose; stipe ivory suffused violet. [NY].

LITERATURE CITED

- Bunting, G. S., 1975. Nuevas Especies para la Revisión de las Aráceas Venezolanas. Acta Bot. Venezuelica 10(1-4): 263-335.
- Bunting, G. S., 1979. Sinopsis de las Araceae de Venezuela. Rev. Fac. Agron. (Maracay) 10(1-4): 139-290.
- Krause, K., 1913. Philodendrinae. In: Das Pflanzenreich (Engler). Heft 60. Araceae-Philodendroideae-Philodendreae IV.23D^b: 1-143.

LIST OF TAXA DESCRIBED

Anthurium aroense	Philodendron dyscarpium var. venturianum
A. berryi	P. exile
A. guanchezii	P. guaiquinimae
A. huequeense	P. inaequilaterum subsp. anthoblastum
A. longissimum subsp. nirguense	P. liesneri
A. perijanum	P. marahuacae
A. subscriptum	P. multinervum
A. xanthoneurum	P. orionis
Caladium aturense	P. peraiense
C. steyermarkii	P. perplexum
Dracontium aricuaisanum	P. rhodoaxis var. angustifolium
D. changuango	P. sabulosum
Heteropsis spruceana var. robusta	P. strictum
H. steyermarkii	P. sucrensis
H. tenuispadix	P. tachirensis
Philodendron sect. Philopsammos	P. tatei subsp. melanochlorum
P. amplisinum	P. triangulare
P. anaadu	P. victoriae
P. appunii	P. wurdackii
P. borgesii	P. yavitense
P. calatheaifolium	Rhodospatha falconensis
P. canaimae	R. gasarensis
P. cataniapoense	R. steyermarkii
P. consobrinum	Stenospermatum ammiticum subsp. neblinae
P. davidsei	Xanthosoma bolivaranum
P. delascioi	X. maroae

LIST OF ILLUSTRATIONS

- Anthurium aroense (Liesner & González 9824). Fig. 1, p. 294
A. berryi (Wood & Berry 95). Fig. 2, p. 294
A. guanchezii (Guánchez & Melgueiro 3451). Fig. 3, p. 294
A. longissimum subsp. nirguense (Steyermark & Bunting 97722), half of leaf blade with central segment. Fig. 4, p. 294
A. perijanum (Steyermark & Dunsterville 105560). Fig. 5, p. 297
A. subscriptum (Guánchez & Melgueiro 3443). Fig. 6, p. 297
A. xanthoneurum (Steyermark et al. 130054). Fig. 7, p. 297
Caladium aturense (Bunting et al. 3480), juvenile. Fig. 9, p. 299; adult. Fig. 10, p. 299
C. steyermarkii (Steyermark et al. 102035). Fig. 8, p. 297
Dracontium aricuaisanum (cult. VZM, ex type locality). Fig. 11, p. 299 (Bunting et al. 10866). Fig. 12, p. 299
D. changuango (Bunting & Trujillo 2221). Fig. 13, p. 304; (Bunting 2856). Fig. 14, p. 304
Heteropsis spruceana var. robusta (Guánchez 1129). Fig. 15, p. 304
H. steyermarkii (Steyermark & Bunting 103056). Fig. 16, p. 304
H. tenuispadix (Berry 2189), with detail of fertile shoot (inset). Fig. 17, p. 308
Philodendron amplisinum (Bunting & León 12848). Fig. 19, p. 308
P. anaadu (Delascio & Guánchez 10916). Fig. 18, p. 308
P. appunii (Bunting et al. 2147). Fig. 20, p. 312
P. borgesii (Bunting 13394). Fig. 21, p. 312
P. calatheifolium (Bunting & Borges 5002). Fig. 22, p. 312
P. canaimae (Steyermark 106396). Fig. 23, p. 312
P. cataniapoense (Steyermark et al. 122235). Fig. 24, p. 315
P. consobrinum (Bunting 4951). Fig. 25, p. 315
P. davidsei (Davidse et al. 18702). Fig. 26, p. 315
P. delascioi (Steyermark et al. 114387). Fig. 27, p. 315
P. dyscarpium var. venturianum (Maguire & Maguire 35539). Fig. 28, p. 318
P. exile (Steyermark 107149). Fig. 29, p. 318
P. guaquinimae (Steyermark & Dunsterville 113297). Fig. 30, p. 318
P. inaequilaterum subsp. anthoblastum (Davidse et al. 16818). Fig. 31, p. 318
P. liesneri (Steyermark & Bunting 102673). Fig. 32, p. 321
P. marahuacae (Steyermark 129688). Fig. 33, p. 321
P. multinervum (Steyermark 107164). Fig. 34, p. 321
P. orionis (Bunting & Fucci 13470), juvenile. Fig. 36, p. 323; adult. Fig. 37, p. 323
P. peraiense (Steyermark 111356). Fig. 35, p. 321
P. perplexum (Bunting 4402). Fig. 38, p. 327
P. rhodoaxis var. angustifolium (Steyermark et al. 106738). Fig. 39, p. 327
P. sabulosum (Bunting et al. 3848A). Fig. 40, p. 327
P. strictum (Bunting 13405). Fig. 41, p. 327
P. sucrense (Bunting 2703). Fig. 42, p. 331
P. tachirense (Bunting et al. 8587). Fig. 43, p. 331
P. tatei subsp. melanochlorum (Steyermark 110050). Fig. 44, p. 331
P. triangulare (Bunting 4372). Fig. 45, p. 331
P. victoriae (Bunting 13377). Fig. 46, p. 334
P. wurdackii (Steyermark & Bunting 102595). Fig. 47, p. 334
P. yavitense (Bunting et al. 3869). Fig. 48, p. 334

- Rhodospatha falconensis* (Wingfield 8221A). Fig. 49, p. 334
R. guasarensis (Bunting et al. 12256), typical leaf. Fig. 50, p. 338; leaf subtending inflorescence. Fig. 51, p. 338
R. steyermarkii (Steyermark & Rabe 96161). Fig. 52, p. 338
Xanthosoma bolivaranum (Bunting 3095). Fig. 54, p. 340
X. maroae (Bunting 4807). Fig. 53, p. 338; (Steyermark & Bunting 102845). Fig. 54, p. 340

ACKNOWLEDGMENT

I am especially grateful to Mr. Wayne Bradford, of The Portrait Shoppee in Salisbury, Maryland, for his kind attention in printing the photographs presented here.